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REAL TIME

One of the first games I ever played on my own PC was a grand strategy World War 2 title, and I've had a love for strategy games ever since. I can remember learning about PC networking only because my mates and I wanted to build an epic Starcraft LAN. We did, too, criss-crossing a run-down terrace in Sydney's inner west with cat-5; it ran up stairs, out windows, under furniture. It probably helped keep the old place standing!

I wasn't a great offensive player, but if you wanted a solid defence built up so you could rush to carriers and swarm the opposition, I could build a Terran gunline that'd make anyone weep. I always have liked playing defence over offense.

Which is also how I won most of my battles in both Rome: Total War and Napoleon, in the same series.

I can manage aggression in Close Combat though, oddly enough. It's all a matter of effectively building a good defence first, and then using that as a springboard for an attack.

So, yeah — I kinda dig on strategy games, and if you're at all like me, this issue is going to be a treat...

David Hollingworth
Editor

"This one's got talent!"

PCPP #275

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Some romance, mostly battles. ALL THE DRAMA.

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Ex-X-COM dev exerts influence.

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Delve too deep.

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We've got some hot stuff this month!

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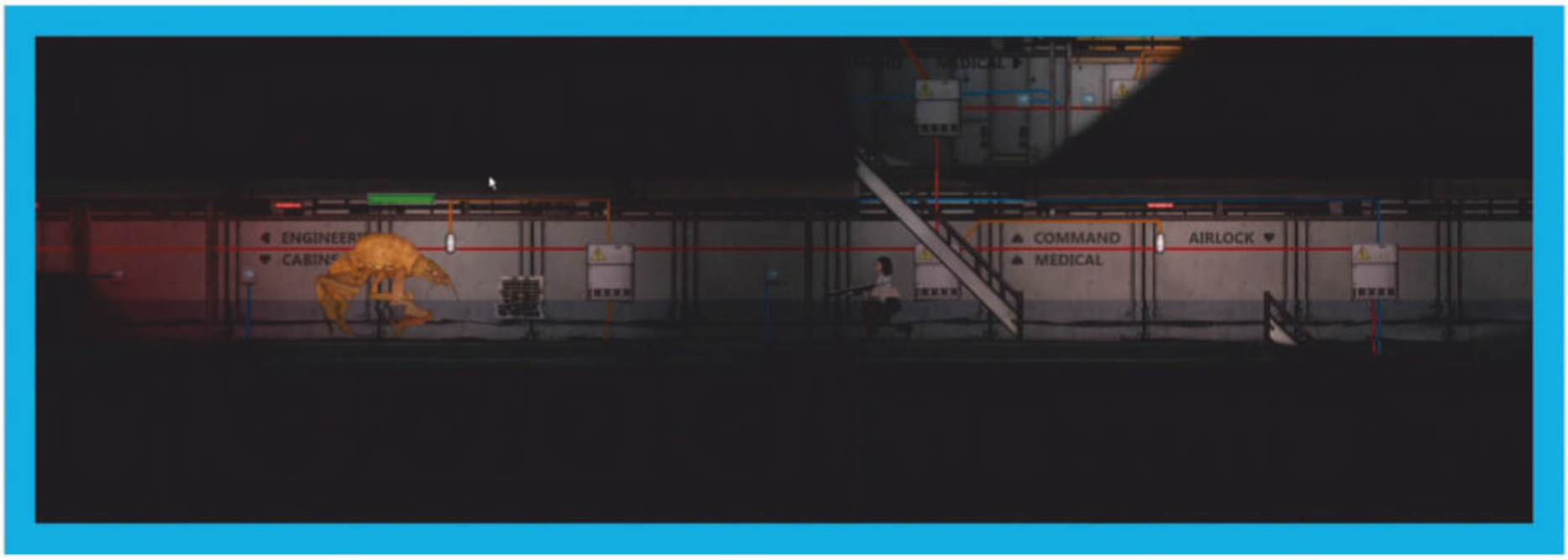

BAROTRAUMA IS PART SUBNAUTICA, PART FTL, AND ALL GONG SHOW

16 people try not to die in this 2D multiplayer sub simulator on an alien world.

Daedalic Entertainment is best known for publishing quirky (but good) point-and-click adventure games, but Barotrauma is something else entirely. It's a 2D submarine simulator for up to 16 players, set in the alien ocean of Jupiter's moon Europa, a deeply inhospitable place that is both passively and actively trying to kill you.

You and your team of explorers are on Europa because the Earth is a mess and you're looking for a better place to live, and for some reason you've decided that your best choice is a moon where survival is only possible beneath the surface. But unlike Subnautica, , the hardware in Barotrauma seems to require a little more hands-on effort.

Players will be able to choose from one of five different classes, including the captain (only one person gets to be the boss, though), and work together in crews of up to 16. Levels and events are procedurally generated to help keep things unpredictable, a "Monster Maker" will enable players to create their own subs, levels, and monsters via the Steam Workshop, and in case there was any doubt, there's no rule that says you actually have to be a team player.

Barotrauma is being developed by FakeFish and Undertow Games, and is expected to launch on Steam Early Access this spring. Find out more at barotrauma.com.

RESPAWNS HAVE BEEN FOUND IN FORTNITE

And they might be coming much sooner than we thought.

Epic said it was exploring a Fortnite respawn system in their AMA last week, though it sounded like a feature in the earliest stages of testing. But some eagle-eyed players have spotted a peculiar van around the map since Season 8 hit, and it could point to a respawn system coming much sooner than we thought.

To see one of the mysterious vans for yourself, pop into a playground match and spawn over Retail Row. It'll be sitting on the south side of The Block, though it despawns if you get too close. I was able to hop into replay mode and use the drone camera to get my own image.

While word of the van spread, Fortnite leaker FortTory dug through the game files looking for anything that might hint at its purpose. They discovered that within the associated mesh files, the vehicle is referred to as a 'Second Chance Van'. Sounds like a respawn point to me.

All of this is still conjecture, so don't take this as a confirmation that respawning is nigh. The van could be related to something else despite the evidence stacked against it, and it's also possible that the feature won't work out in testing. But I know a lot of people looking to give Fortnite its own second chance, and a feature that makes Fortnite's steep learning curve a little easier to climb would do well to reinvigorate the playerbase.

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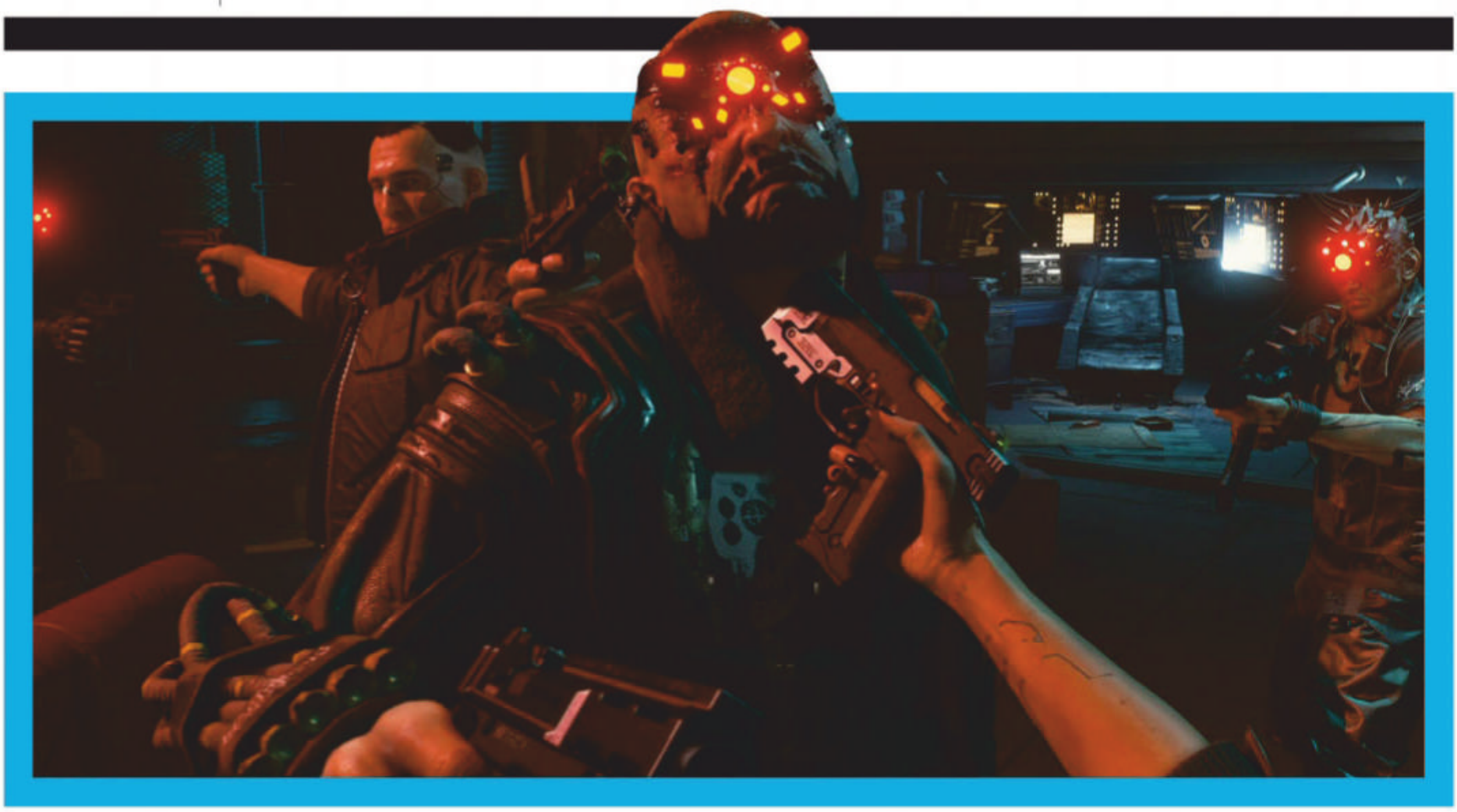

CYBERPUNK 2077 WILL BE AT E3

Just in case you were wondering.

E3 is still several months away, but it's still close enough to answer the one that's on everyone's mind: Yes, Cyberpunk 2077 will be there, according to an official tweet.

And yes, Cyberpunk 2077 was at the previous E3, so barring disaster on an unprecedented scale there was no reason to expect that it wouldn't be back for 2019, too. The hope is that it will be a publicly-playable appearance this time around, rather than last year's behind-closed-doors sessions, a hope that's bolstered by the fact that CD Projekt said last summer that the game is fully playable from start to finish.

Cyberpunk's 2018 turn was the game's first appearance at E3, which is kind of remarkable given that it was announced a full six years earlier. The good news for eager fans is that it went over really well: It was a lot more of a shooter than most of us expected, but that turned out to be more of a happy surprise than anything, and the presentation ultimately earned our "Best of E3 2018" award.

A release date hasn't been set.

PHOENIX WRIGHT: ACE ATTORNEY TRILOGY IS COMING TO PC

No objection here.

On April 9 we'll finally have the chance to enjoy Phoenix Wright on PC. The Phoenix Wright: Ace Attorney Trilogy package contains the 14 episodes that make up the first three games. It's available to pre-purchase on Steam now for US$29.99.

Phoenix Wright started out on handhelds like the Game Boy Advance and the Nintendo DS. It's a comedy adventure game series in which you snoop around crime scenes and talk to suspects to gather clues. At the climax of the case you deploy these clues as smackdowns in absurd but surprisingly tense courtroom scenes.

They are great games to travel with, and the DS version encouraged people to yell "OBJECTION" into their device to trigger Wright's famous point. I'm not sure how well they will translate to a full-monitor desk setup, but it's nice to have the option. The trilogy is also coming to PS4, Xbox One, and Switch.

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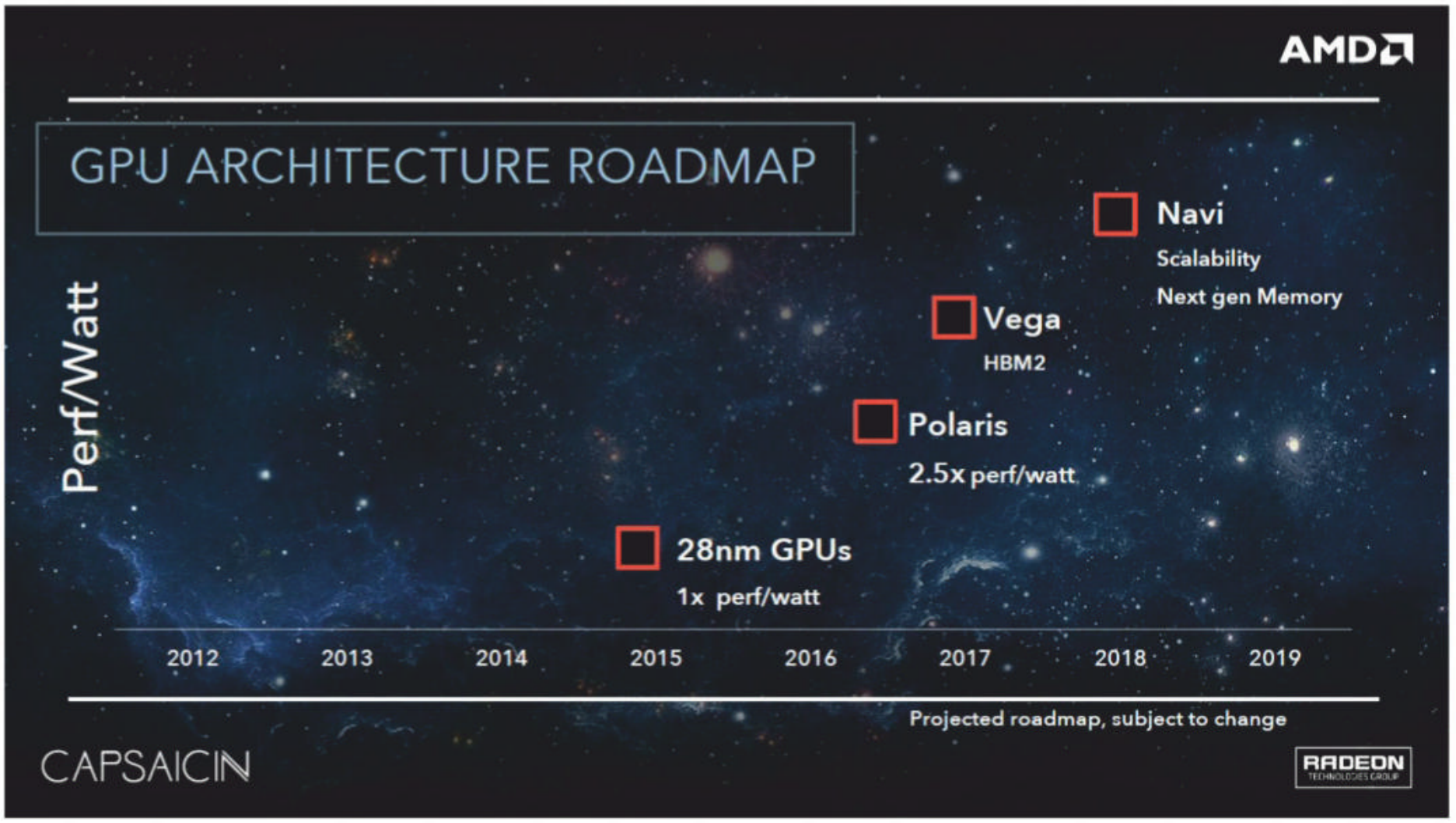

FUTURE AMD GPUS MAY SUPPORTVARIABLE RATE SHADING

VR games could get a boost.

An AMD patent filing from 2017 that was recently made public shows AMD exploring the implementation of variable rate shading (VRS) technology in its next-generation GPUs. Although the patent doesn't specify which future architecture will get it, there's a good chance AMD will try to have the technology built into its upcoming Navi GPUs, considering Nvidia has already integrated VRS into its latest Turing architecture.

VRS resolves certain sections of a frame in full detail (like the center of the screen, on which your eyes tend to focus) and reduces the detail on other parts of the frame to lower the rendering load. In other words, the shading in the game will happen at a variable rate (thus the "variable rate shading" name).

AMD hasn't stated that this technology will be made available in the company's upcoming Navi GPUs, which doesn't have an official release date still. However, considering that Nvidia has already implemented VRS in Turing, it's possible AMD may implement it soon, too, as chances are the two companies started working on VRS roughly at the same time.

VRS may be most useful to VR-enabled games, as well as consoles that support VR gaming. The Navi architecture is rumored to be used in the next-generation PlayStation, whose games could benefit from the VRS support if Sony intends to once again pair its new console with a next-generation VR headset.

COOLER MASTER LAUNCHES A KEYBOARD WITH PRESSURE-SENSITIVE KEYS FOR $200

This keyboard implements Aimpad technology for precision control.

Cooler Master's new MK850 (not to be confused with Logitech's MK850 keyboard and mouse combo) is an analog plank that uses Cherry MX key switches capable of sensing the entire 4mm range of a key press. Traditional mechanical keyboards can't do this — the switches simply register a press at the actuation point.

"The MK850 is the world's first mechanical keyboard, using Cherry MX switches, capable of sensing exactly how far down you press the key," says Lance Madsen, Aimpad principle engineer. "It provides unparalleled control in even the most demanding PC games."

Aimpad technology is already found in other peripherals, such as aviation joysticks, steering wheels, and game controllers. By implementing pressure-sensitive input into a keyboard, gamers have more fine-grain control over movements.

Beyond the pressure-sensitive keys, the MK850 features a brushed aluminum deck with keys that appear to float on top, as we have seen in various other models. There is a row of dedicated macro/gaming keys on the left, and two "precision wheels" to adjust things like volume RGB illumination, dpi, and so forth. It also comes with a magnetic wrist rest.

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NVIDIA AND OBS WANT YOU TO SAY BYE TO DUAL-PC LIVESTREAMING

New GPU-based solution makes showing the world your l33t skills easier.

Livestreaming is easier than ever, but it can still be hard on a PC. Many streamers use dual-PC setups in which one system is used to actually play a game and the other to stream it. But this week Nvidia announced that a new version of OBS, the software underpinning many livestreaming setups, is optimised to let people who use Nvidia GPUs host quality streams from a single PC.

The optimisation arrives via improved support for the NVENC hardware encoder used by Nvidia's GPUs. Most streamers use GPU-powered encoding rather than relying on their CPUs because that allows them to use their graphics cards to their full potential instead of being bottlenecked by their processor. That can be taxing on the GPU, though, leading to lower in-game frame rates.

According to Nvidia, OBS Studio version 23 "reduces the FPS impact of streaming by up to 66 percent compared to the previous version." That ostensibly means that streamers no longer have to choose between lowering the quality of their streams, dealing with low in-game frame rates, or investing in a dual-PC setup. These optimisations affect 600-series and newer GPUs with NVENC.

Of course, the company also used the opportunity to highlight the advantages its RTX graphics cards can offer streamers (we wonder why.) Nvidia claimed using its latest-and-greatest offerings "will noticeably improve image quality at reduced bitrates," thanks to "architectural improvements to the dedicated hardware encoder." That should help streamers with less-than-stellar internet speeds.

Aside from the above comparison, Nvidia said the new optimisations improved framerates by up to 48 percent in Fortnite, PlayerUnknown's Battlegrounds, Call of Duty: Black Ops 4 — Blackout and Apex Legends compared to x264 Fast encoding (the focus on battle royale titles likely resulting from the genre's massive popularity on every major streaming platform).

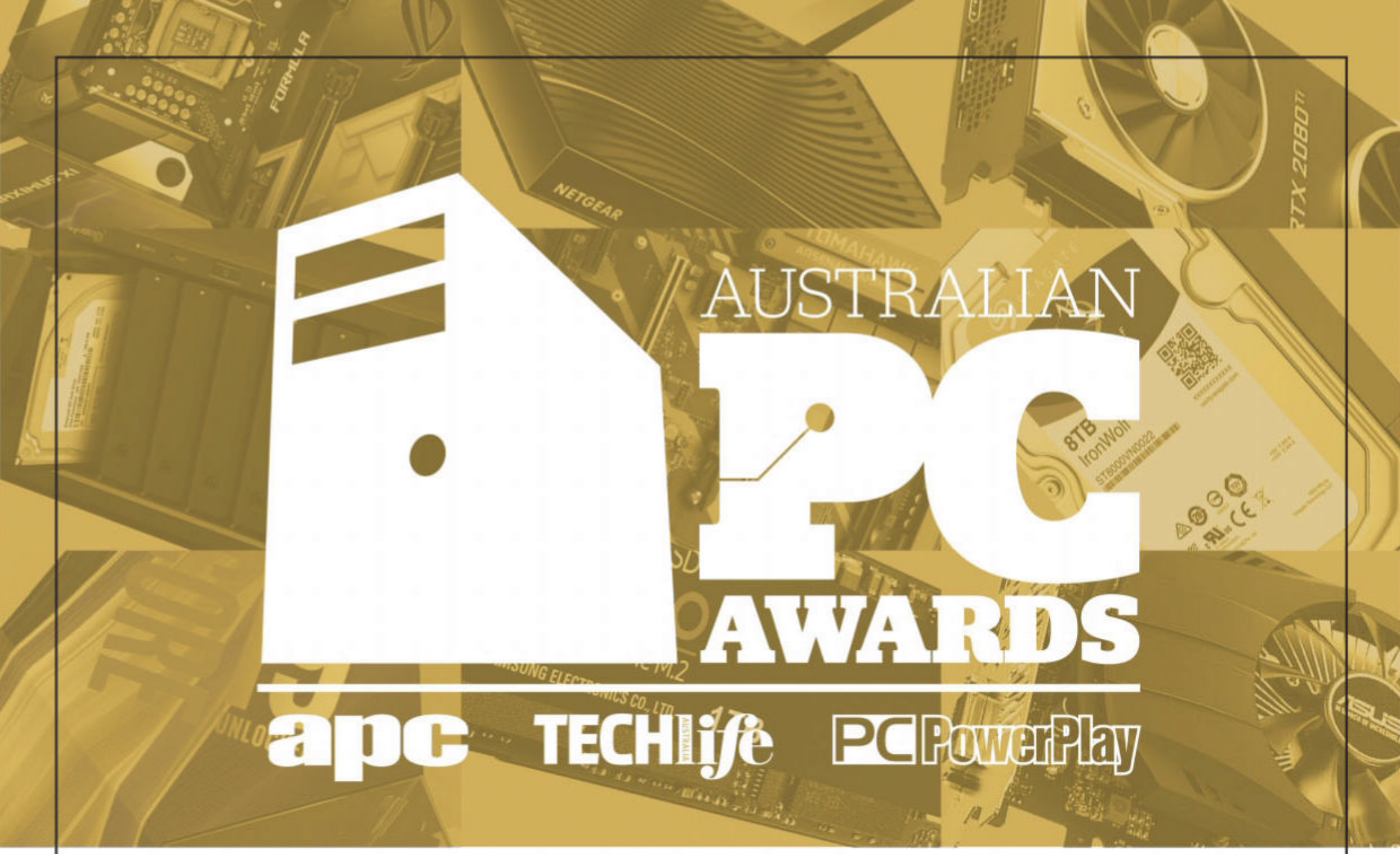
OBS Studio version 23 is available now for Windows, macOS, and Linux at this website. Nvidia said StreamLabs, a popular streaming platform that uses OBS as a base for its own app, "will implement these improvements in their client in the near future." Hopefully that will help save smaller streamers from the hassle of buying and using a dual-PC setup just to improve their stream's quality.

NZXT INTRODUCES AN OVERWATCH-THEMED CASE

That logo is really hard to miss.

NZXT has combined its powers with Blizzard Entertainment to create a special edition case from its popular H500 model, one of the best PC cases, just in time for the current Overwatch League season. Aside from the aesthetics, not much is different about the actual case design. It comes in a black, white, and orange color combination, and both the front of the case and the side are adorned with the Overwatch logo, while the entire Overwatch name is also on the side of the case.

Other than that, since NZXT is using its own H500 model, expect the same all-metal chassis, tempered glass panel, and simplified cable management and water-cooling installation.



WHAT WON?

Did the gear you voted for in the *Australian PC Awards* get the gong? See the full list of winners as voted for by the readers of *PC PowerPlay, APC, TechLife* and *TechRadar*.

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TEAM IMMUNITY EARNS PODIUM SPOT AT THE PREDATOR LEAGUE APAC FINALS

Our locals may not have won, but they were the single deadliest team of the event!

Last month saw the Asia Pacific Predator League Grand Final kick off in Bangkok, with 16 teams competing to dominate PUBG, and 10 leading DOTA 2 teams fighting it out – all for a prize pool of $US250,000.

South Korean team Afreeca Freecs Fatal made it to the final circle in the PUBG tourney, and took home an impressive $US75,000 and a Predator notebook each, while TNC Predator, from the Philippines, took home the bacon in the DOTA 2 finals.

Representing Australia, Team Immunity may not have won, but they didn't disappoint, either. In the 12th round of the event TI scored 20 kills – the highest kill-count of any competing team, while TI member Nick101 ranked the second most lethal player, with 29 fatalities with his trusty Mini 14 rifle. Team Immunity ranked third overall.

We were unable to attend the event this year, but we were able to catch up with Darren Simmons, the Oceanic Managing Director of Acer, for a chat.

PCPP: *We really wish we could have attended the event; an you tell me the scale of the support that Acer's given to the tournament?*

Darren Simmons: Acer founded the Predator League at a global level in 2017, creating a tournament that would build an ecosystem in which Acer and Predator could support gamers and the esports community globally.

Originally the Asia Pacific league only featured one game — Dota 2 — and ANZ was not represented, but we added PUBG to the tournament this year to cater to a new audience and open the competition to a greater range of teams. Locally, we felt that the level of esport talent had risen significantly in ANZ, paving the way for us to open the tournament to teams from our region. Team Immunity won the OCE Open Series, which was the ANZ qualifier for Predator League, and proved that ANZ is more than ready by taking third — cementing Australia as a serious player in the APAC gaming scene.

> Most of the teams competing at the Asia Pacific Predator League participate regularly in major and minor esport leagues, but Australia and New Zealand don't have this competition infrastructure to develop talent.

Round 12 of the PUBG tournament was a huge highlight as Team Immunity dominated with 20 kill points, which was the highest number of kills in any round of the tournament. Team Immunity's Nick101 also ranked second overall for kills in the competition, clocking up 29. These kind of numbers show that ANZ has a serious chance at taking a Predator League win in the near future.

PCPP: *And what does Acer get out of this? Brand recognition would seem big, but what are the other advantages of supporting eSports? And PUBG specifically?*

Darren: We recognise the importance of building a strong presence in esport within our region, and are working closely with our retail partner Harvey Norman to develop talent. Predator League is key to developing this presence — acting as a testing ground for our computers and allowing us to be more involved with our audience by creating an organic opportunity to talk with them and understand what they want from Predator as a brand and as a hardware provider.

In terms of why PUBG, this game was selected following research within the region examining which games resonate well with the players. In APAC, Dota 2 and PUBG ranked highly.

PCPP: *Looking closer to home, what is Acer doing to help the local eSports scene grow and mature?*

Darren: Within Acer, Predator is becoming increasingly important and is a major focus for the business. In Australia, we're opening up dedicated online channels to connect with players and are in the process of developing grassroots initiatives to be activated in the coming year, which will feed into the qualifiers for Predator League 2020 in the Philippines.

In the near future, we've increased our engagement with IEM and will have a big presence at the event in Sydney this May. There's plenty more in the pipeline, but we're not able to give more details at this stage.

PCPP: *Does the region present any unique challenges in that regard?*

Darren: ANZ is a challenging market for esport athletes. Most of the teams competing at the Asia Pacific Predator League participate regularly in major and minor esport leagues, but Australia and New Zealand don't have this competition infrastructure to develop talent.

When competing at a high level in any sport, being able to gain experience on the competitive stage is essential for taking world titles in the future, and Australian teams don't have access to these testing grounds. This makes it even more impressive that Team Immunity were able to perform to such a high standard, and take third place in the PUBG competition this year.

With these challenges in mind, it's a priority for Predator to develop more competition events within Australia, and continue building a brand that has a history and plays a key role in competitive esport.

PCPP: *Thanks for supporting the local scene!* PC

The Two Faces of Tomorrow

It is the year 2019, and the line between documentary and advertorial content has been blurred beyond recognition...

Anyone who wastes half their waking life online will be familiar with the magic of the YouTube recommendation system. Watch, say, a military ration unboxing video, and upon it's conclusion YouTube will automatically cue up another, and another... and before long you'll know that Norwegian MREs contain stewed reindeer, and that it took the US Army 30 years to figure out how to store pizza slices at room temperature.

Likewise, watch hour after hour of Alex Jones-style videos and you'll soon 'know' that the Earth is flat, and that the sun is made out of 'metallic hydrogen'. In an attempt to inhibit this indoctrinating effect YouTube recently announced that kooky conspiracy videos will no longer be automatically recommended.

This new policy is a turning point for YouTube, because it's a tacit admission that a great deal of the 'information' on the platform simply isn't true.

There are some striking examples in the world of gaming, but perhaps the most noteworthy is the official Star Citizen YouTube channel. Star Citizen is a runaway crowd-funding success, and Chris Roberts and his cohorts have promised a development process characterised by unprecedented openness and honesty. To that end they have released over 1,200 promo videos. Videos filled with promises, explicit and implicit, that have yet to be fulfilled.

An unfailingly uncritical viewpoint is to be expected from the game's official promotional organ. But to see such propaganda from supposedly independent media outlets is a tad unnerving.

Red Bull Gaming recently published a 13-minute clip about Star Citizen, and it was pure hagiography. The production standards were impressive; the multi-layered electronic music, drone shots, slick jump cuts, and humorous interview fragments coalesced into a hypnotic hype vortex. If this video was all you had seen of Star Citizen, you might be left with the impression that the game was in good hands.

JAMES COTTEE is clearly a fan of Steve1989MREinfo on YouTube and frankly you should be too. Nice!

Yet there are many valid questions that Red Bull's documentary team did not ask. After eight years of development and a quarter of a billion dollars, why are there still so many bugs in Star Citizen's Persistent Universe? Why do mannequin eyes blink? Why do space pirates sometimes appear as tiny floating golf balls?

Why does Roberts Space Industries build assets with no real game mechanics to support them? Why are they selling huge multi-crew ships when there are no multi-crew mechanics? Why do they sell salvage ships when there are no salvage mechanics? Why do they sell scanning ships when there are no scanning mechanics? What about bounty hunting, data running, and medical ships? When will their game mechanics be implemented? Why don't missiles work properly? When will missiles work properly?

RSI published a video in 2013 showing a topless woman being scanned in quite meticulous detail, supposedly so they could implement playable female characters. It's been six years, and female characters are still not playable. Why? Many games with budgets of less than a quarter of a billion dollars have been able to implement this.

This video was not an isolated incident; shortly thereafter Red Bull Gaming published a glowing documentary about Peter Molyneux. The vid did not mention his crowd-funding disaster Godus, the malformed and unfinished spiritual successor to Populous. Amazingly, it did touch on his life-long habit of making exaggerations about his upcoming games:

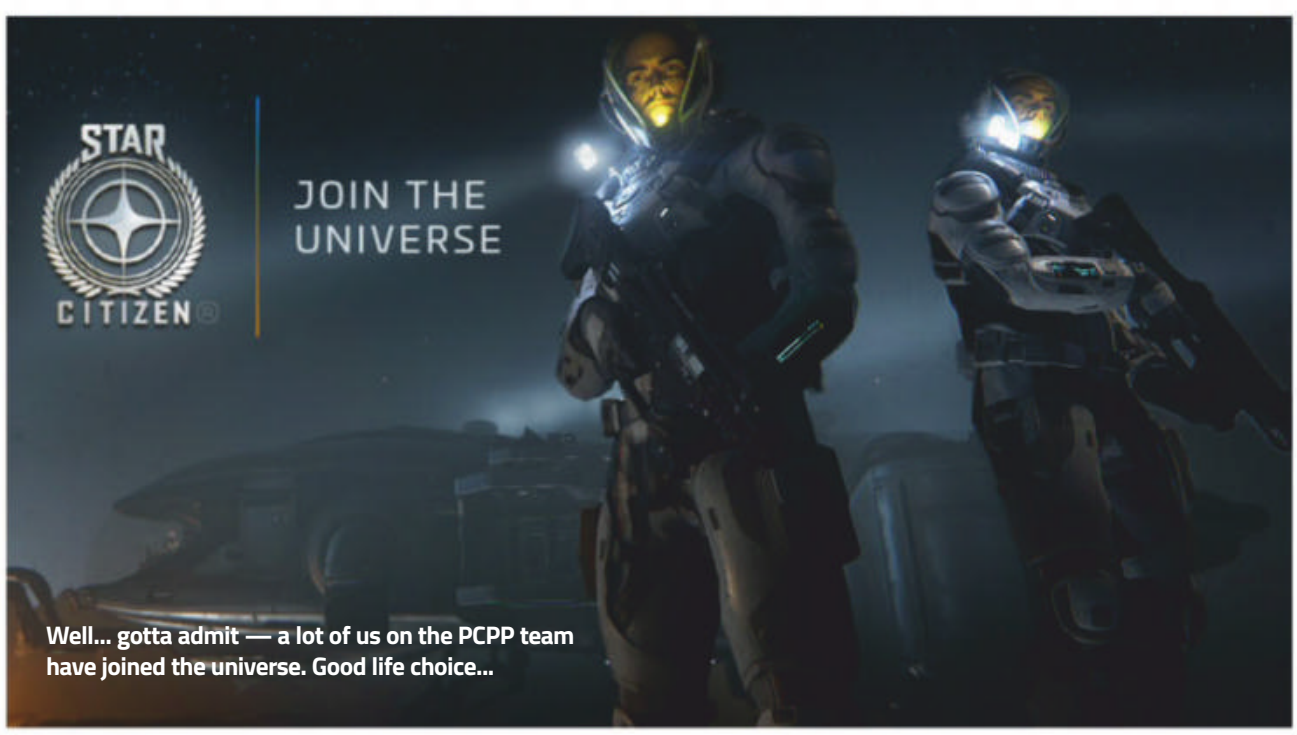
"Whenever I talk about a game, I'm just talking from my heart. It's how I talk to the team. And that's what I think you have to do if you're gonna make something. You've gotta believe in your heart it's gonna be the best it can possibly be. I think some people justifiably felt that everything I said was a promise, especially when I would do a lot of press. I didn't really make that connection until it was far too late."

He said all this with a straight face. He basically claimed that he simply didn't understand that you're not supposed to lie about the products you're selling (aw, shucks!). All this was intercut with close-ups of his wedding ring, to subliminally communicate how committed and trustworthy he is. Fantastic camera work; hats off to the creatives at the 'House of Greenland' production company.

These Red Bull Gaming videos are not marked as advertorial, but they sure feel like it. Did Chris Roberts and Peter Molyneux pay for this coverage? If so, how much? Is this a valid use of backer funds? Is this the sort of infotainment that Red Bull wants associated with its brand? And, most important of all, why would anyone buy Red Bull when you can buy functionally identical little cans of energy drink from ALDI for just 99 cents each?

The mistake of promoting one aging hack game designer could be put down to misfortune. But two? That begins to look like carelessness... PC

> "Whenever I talk about a game, I'm just talking from my heart. It's how I talk to the team."



Well... gotta admit — a lot of us on the PCPP team have joined the universe. Good life choice...

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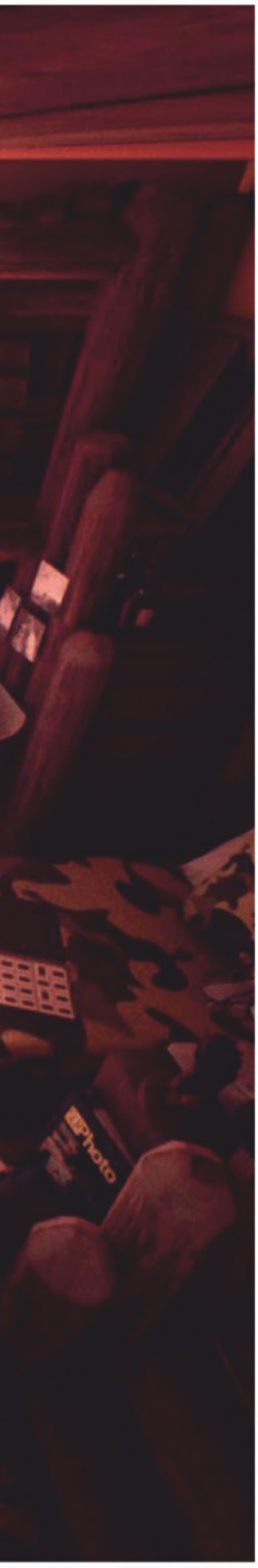


Little boys' room

One of the most striking areas in What Remains of Edith Finch is the twins' room. Designer Chris Bell picks out key details. **PHILIPPA WARR**

FORT-LESS

1 The room didn't always have its distinctive opposing forts. Instead it was a 'T' shaped space — two lofted bunk beds joined by a single set of stairs between them. The forts idea came around the same time as Calvin's death by swingset story.

LOW ENTRY

2 Crawling into the room, you can only see Calvin's side—a ten-year-old's room. "The player gets an immediate read of 'kids room'—but when they stand and turn and see Sam's liquor and cigarettes and camera tripod, it's a surprise," says Bell.

MOVING ON

3 Little touches make it clear Sam outlived Calvin. Sam's height marking on the door leave Calvin's behind, Sam's fort bridge has been taken down and the fort itself is used for box storage. Sam also has the aforementioned liquor and cigarettes.

SPACE RACE

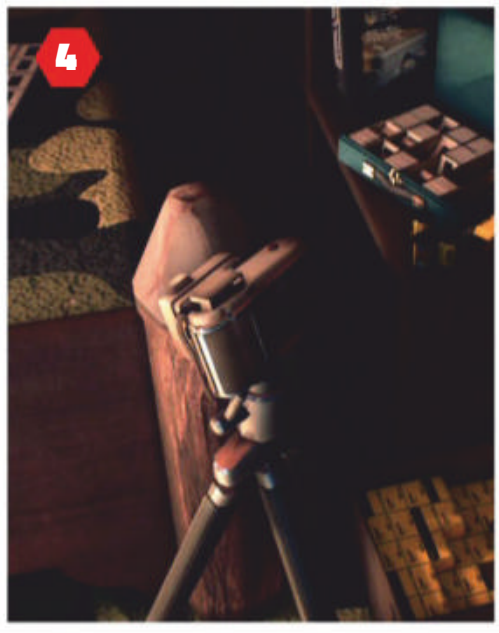
4 Calvin's love of space came because it paired well with the story of wanting to go high on a swingset. Sam's story was themed around photography, so his side picks up those references with the darkroom, tripod and so on.

SIGNPOSTING

5 To ensure players didn't miss Calvin's lookout, the team painted "To Command Center" in big letters on the stairs and added a sign above the lookout entrance. An electric cable traces the path, "drawing a literal line for them" says Bell.

BELL'S OWN HISTORY

6 "I had a blast designing this room ... inspired by fond memories of building forts with my brother Stephen and little cousin Shane, roleplaying cops and robbers, or trying not to hurt each other while wrestling and playing King of the Hill Bed."



Inside Dev

MAKING GAMES IS HARD.

Too-Early Adoption

How devs decide to make games for new ecosystems. By **XALAVIER NELSON JR**

Cash payments. Exclusive development support. Marketing features with increased visibility. These are just a few of the incentives that may be offered to a developer in return for committing to a new platform early. An ecosystem needs projects supporting it, and devs need to ensure that they have a substantial audience to sell their games to. However, when a platform is actual hardware that takes up space, the costs and considerations developers face can vary wildly.

"I first got to try the Magic Leap 1 as part of a contract early in 2018, and I immediately knew that I wanted to find a way to work with the device," says veteran independent developer and consultant Ryan Evans. "[Magic Leap] lets you imbue everyday objects and spaces around you with new meaning and lets you interact with familiar spaces in an all new way." However, the cost of innovation was not cheap. The headset alone cost him $2,295 dollars — not including tax — and the company couldn't ship it to his home so Evans had to drive to San Francisco. "The expenses so far have mostly just been money," Evans says. "To their credit, Magic Leap just had a grant application process to give money and hardware to indie developers with ideas. Getting funding from a platform holder goes a long way into making early development viable. In the meantime I'll keep looking for consulting work in the space to continue to self-fund, and hopefully as a consumer market comes into existence I can keep making more games for them." While Evans will have to buy necessary future iterations of the hardware as well, he believes continued consulting jobs that use his growing knowledge of the technology will put him in a prime position to recoup costs and take advantage of the Leap's potential growth in the consumer market in the future.

On the other side of the cost scale, you'll find developers like Alistair Aitcheson, a creator who uses custom hardware he builds himself for playful art installations (such as a piece at the National Videogame Museum) and interactive stage shows. "A lot of my work is made using Arduinos," says Aitcheson. "There's certainly cheaper alternatives, but I'm happy to pay the extra to avoid having to faff around with setup. Other props are found on eBay: Rubber chickens, Duplo and Morphsuits, for example. There's a joy in creating something surprising out of really cheap parts. People can see how it was made and be inspired by that."

> "There's a joy in creating something surprising out of really cheap parts."

The developers of System Shock-inspired minimal first-person adventure Spirits of Xanadu found their project gaining Tobii Eye Tracker compatibility with no extra cost or effort, as the company needed more titles under their banner. "In our case, they used a software wrapper rather than native support so it didn't require any effort on our part to implement," says Spirits of Xanadu writer Lee Williams. "With nothing to lose, and intrigued by the new tech, we agreed to let them add the support in return for placement on their website."

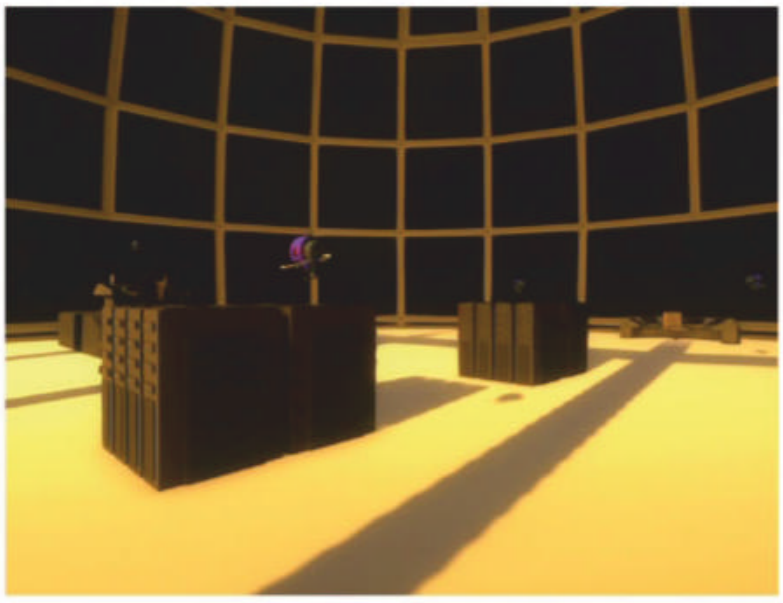
SWEET SPOT

While even low-cost development for new or custom hardware can seem daunting, one element that drives developers to tackle these challenges is fear. What happens if a platform is the opportunity their game needs, and they miss its golden launch period? That's the question the developers of subversive indie platformer The Messenger faced with the Nintendo Switch in early 2018. "We never doubted that launching on Switch was a great idea," studio cofounder Martin Brouard said. "However as more and more games started to come out on Switch in the second half of 2018, it became harder to be some kind of no-brainer purchase for players. Nintendo did give us a lot of visibility, though, so our sales on that platform are very good. But had we launched three to four months earlier we probably would have struck gold in a major way. We are still happy with the results, though." In the end, polishing the game, and receiving major marketing showcases from Nintendo as well as publisher Devolver Digital helped The Messenger surmount an increasingly crowded market to some degree.

A new platform—particularly one with a physical component—is a risk for everyone involved. However, the more this risk is assuaged for the creative people who make the content these platforms need, the more likely success is for everyone in our industry's constant pursuit of a new horizon. PC

XALAVIER NELSON JR.
I'm a full-time game writer and narrative designer, with credits inside and out of gaming.

Alistair Aitcheson's custom hardware, such as the pictured 'The Book Ritual', uses cheap Arduino kits as a base for artistic installations and playful interactive shows.



FAR LEFT: The Magic Leap Creator's Edition currently costs developers nearly $2,300 to buy, with no special benefits attached.

LEFT: The devs of subversive indie throwback The Messenger launched on PC and Switch simultaneously, just after the Switch market began to get crowded.

WHAT THE TECH?

HERE ARE A FEW OF THE CURIOUS PERIPHERALS THAT BUILT SIGNIFICANT INDUSTRY SUPPORT

TOBII EYE TRACKER
The Tobii website boasts over 130 games using its eye-tracking technology. Players can control and interact with games from *Hitman* to *Assassin's Creed Odyssey*, using sets of 'gaze-based interactions'.

RAZER HYDRA
This magnetized motion controller might have faded into the memory of obscure peripheral lists everywhere, if not for its ties to Valve. The Razer Hydra *Portal 2* bundle has over a dozen levels exclusive to its version of the game.

G560 LIGHTSYNC SPEAKERS
Using rear-facing LEDs, Logitech's Lightsync speakers projected color and significant game information into your physical space in major triple-A games of the time including *Battlefield 1*, *CS: GO* and *GTA V*.

LEAP MOTION
A relatively low cost of entry for hand tracking made the Leap Motion an attractive option for adding physical interaction to independent projects, as with FlyInside's modding of Microsoft's *Flight Simulator X*.

I'm gonna live forever

Assuming I can figure out how to sneak past the bouncer at the Starlight Accolades and snatch an award.

It became clear that my optimal Sims 4 playstyle was forcing me down dubious moral paths (again) when I (very deliberately) sat Residency of the Heart's director under the flirty painting (that the famous artist flatmate created for this very purpose). Was I woohooing my way to better acting roles? I mean, no, because I only needed to get flirty and flirt with someone four times to 'research' the flirty emotion for my new gig. The fact that I also had to invite the director over, to improve job performance, almost seems like a coincidence.

The Get Famous expansion pack links together mutually supportive content, both new and old, perfectly. You don't need to pursue the new, active acting career; you can become famous by doing practically anything. In fact, I spent some time gardening, then flower arranging, and recording this with a drone. Then I learned how to edit the videos to an excellent quality with the media production skill, releasing them in line with viewership trends. See? It's not all creepy.

I mean, clearly I'm being more creepy than the game is trying to be. When I tried to stream footage of a sim in the shower, for example, the drone inconspicuously turned itself off. I wanted to see if nudity would make gathering fame points more efficient. Unfortunately, there doesn't seem to be a benefit to streaming anything in particular, even events like celebrity weddings, which, of course, means you have to stream all the bloody time. Here is my sim, practicing acting in the mirror for ten hours, eating a cake, watering the plants, patting the dog.

I now understand why real life streamers get so stressed about being constantly available. And, after all that effort, I didn't even win any awards at the Starlight Accolades. It's also incredibly difficult to capture 'good deeds', like comforting someone when they're sad, on stream, to improve your public reputation. I may have achieved a decent level of fame, but everyone hated me. Interestingly, I tended to become more hated as a result of the new career wildcards that require the kinds of job performance sacrifices I'm not willing to make.

MEGHANN O'NEILL
If Meghann O'Neill deserves to be famous for anything, in real life, it's how many grapes she can throw into her mouth in a row before one hits the floor. She hasn't choked to death yet, either.

This is the crux of why Get Famous, despite my inability to instantly Get Famous by Getting Naked, exceeds my expectations. The original iteration, The Sims Superstar, was never fully reprised in Sims 2 and 3, largely because it completely changed the game, and in ways that players didn't necessarily want to be forced into. Townies got split into Somebodies and Anybodies, half of whom wouldn't talk to you unless you neglected literally every other aspect of the game to become Somebody.

Yes, there's pressure to constantly build fame points in The Sims 4, because they deteriorate, but fame is integrated into a surprising number of other game mechanics. As well as developing any skill you like, while streaming, and recording special videos about whichever emotional state you're in, the quirk system provides both powerful buffs and debuffs via game interactions. Unlike almost anything else in The Sims, quirks are assigned automatically, based on what your famous sim does most of the time and would like to keep doing.

One of my famous Sims got the Refined Palate quirk, because she was cooking excellent meals. This was easy to manage because she could already cook excellent meals and they'd give her a hefty +3 happy moodlet. The actor developed a more difficult quirk to manage; Vain Street. Sure, admiring herself in mirrors gave her a +2 confident moodlet, but not admiring herself made her tense. In addition to this, superseding +2 confident with any other emotion is difficult.

> **"I now understand why real life streamers get so stressed about being constantly available."**

By far the best thing about Get Famous is that it makes the game more difficult. Usually, I'd play the expansion's new career, then get bored. But fame is an additional challenge, especially when up to four quirks come into play. The Sims 4 has always championed a self-directed approach, but it's silly to choose the personality traits that are counterproductive.

What's next for my household of starlets? Well, the actor is having a baby. No, not with the director. That was too weird, even for me, though it would have been convenient. I moved in a younger guy whose role is to make babies and edit the videos my artist, flower-arranger and actor make. He's support crew. He also reads the many fan letters than get delivered to the mailbox. It's ironic that Get Famous has re-sparked my interest in The Sims 4, when Superstar killed the original game for me. It's challenging and weird – two of my favourite things. PC

The home of technology

techradar.com

A Collection Aside

MEGHANN O'NEILL has been everywhere, man. She's ridden the rails to parts unknown, and could tell you many a tale. She's taken leaps of faith and collected stars, and mastered magicks beyond comprehension. She's survived family traumas, and even swum with a... koala. And all without leaving her PC!

GRIS

DEVELOPER NOMADO STUDIO • **PRICE** $24
https://nomada.studio/

I'm guessing Gris will get its share of reviews and that most reviewers (and we have another review this issue, but Meghann's appreciation for music is worth indulging – Ed) will highlight the art. It's a pretty game where colours are collected incrementally. Red is first then, around 20 minutes later, green. I didn't know how much I wanted green until it was there. I became even more fond of the music and sound design, however, very early on. A dust storm blew in and the piano transformed into swirling organ and vocal parts. These little musical accoutrements defined Gris for me, because I can appreciate how thoughtfully sound was implemented.

Progression often happens, for example, as you collect stars and bring them to a place where you can create a platform to a new area. As you approach the stars, a new, sparse, musical stem overrides the piece and it's often a whole tone lower. This is very engaging, focusing attention and grounding an important moment. I particularly liked a textural change in the music, too, when you're activating a kind of giant machine. In that case, the music functioned as a reward for cleverness and I felt motivated to continue on.

Over the course of the game, the protagonist finds her voice, eventually using it as an ability. Unsurprisingly, the vocal sounds weave into the soundscape. The story unfolds as a progression of metaphors across a world which starts to feel very familiar. There are bosses to deal with, and friends who will help. Explicit instructions and storytelling moments are rare, so you'll need to rely on observation and imagination, to fill in the blanks. I played Gris with my kids and interpreting what was happening was half the fun.

Many of the puzzles are also a delight to solve. I enjoyed experimenting and being surprised by the result. There are several moments where you have to take a literal leap of faith and jump into nothingness, because there's nowhere else to go. One time, I was falling and a lovely piano and strings part started up, being timed to finish right when I reached the new destination. There were also moments, in an icy, underground place, where I eventually visualised a correct solution, based on physics, after thinking the problem was unsolvable. I do like that.

> "There are several moments where you have to take a literal leap of faith and jump into nothingness, because there's nowhere else to go."

Gris is not without its minor frustrations, however. If you get stuck, you can get really stuck. In a way, it's wonderful that wide, open levels subvert the expectation to always travel up and to the right but, if you fail to notice a crumbling floor, or jar of birds, you may end up searching fruitlessly, far and wide. I also feel the game could have made its point in about a third of its content. Once I'd appreciated the art, music, level design and how the puzzles worked, the later stages felt superfluous. Some of the platforming challenges are also very punitive.

If you're interesting in visual art in videogames, Gris is an easy sell. It's more difficult to get an impression of how elegantly the music is implemented, simply by looking at the game, or even from a trailer, so this is why I've focused on reviewing from a musical angle. Although the story and puzzling are strong, it was the tinkling every time I passed a bell, lights turning on via a dulled pentatonic scale, and the frightening roar of a dust storm that hooked me. Gris is a game that sounds even more lovely than it looks. It's innovative, imperfect and engaging.

He starts telling them a story about the man who had to travel six hundred miles to find a single job. You realize almost instantly that he's telling a new version of the tale of the couple parted by unemployment, but with new, exciting, over-the-top details.
HE TELLS IT WELL
RELEASED

WHERE THE WATER TASTES LIKE WINE

DEVELOPER NOMADO STUDIO • $30
www.wherethewatertasteslikewine.com/

I'm going to tell you my story, because I know it won't spoil yours. There's a lot to explore, in Where the Water Tastes Like Wine, in your own way, at your own pace. The beginning will be the same, though; a game of cards, a promise. We're crossing America, collecting stories, sharing them, listening to them evolve each time they're told by someone we told them to. I headed south, surprised by how slow my old bones were walking. I tried 'shift', to sprint, and started whistling instead. Matching notes, keeping my spirits up, made walking faster.

I met a scared boy who had run away from his father, and witnessed a storm created by a bird, at least that's how I recall it now. As the sky grew dark, I approached a lighthouse and spent the evening with lovers who craved a quiet life. I hitchhiked, on subsequent days, to wherever the driver who would take me was going, and found myself humming along to the soundtrack; blues/country lyrics sung by live musicians. Things are pretty slow, and they need to be, because each vignette you encounter feels more special as a result of waiting for it.

Cities provided respite, sometimes work, or an expensive train ride to somewhere else (stealing away in a boxcar can be dangerous.) I worked in a cold meat locker in Boston, which was good for my wallet, bad for my health. I stayed up all night, under the stars, with other wanderers, those who were on their way somewhere, and those who had nowhere else to be. I told a war veteran about the couple in the lighthouse. Soon enough, people on the road were telling a version of that story back to me.

Where the Water Tastes Like Wine is full of life. These are people touched, in so many ways, by the Great Depression. I met a man on Miami beach who had lost his job. As he was telling me his story, I realised that I would go on to share it with others either as a tale of optimism, or despair, based on how the conversation unfolded, and as indicated by tarot icons tied to my dialogue choices. Everyone dealt with their circumstances differently. Some were bitter, others were hopeful, hedonistic, scared, philosophical or any other thing.

> "We're crossing America, collecting stories, sharing them, listening to them evolve each time they're told by someone we told them to."

I also found myself trailing Dupree, written by Cara Ellison (because each main character is written by a different writer). After witnessing a seance, somewhere in the deep south, I checked my map, just to see where she was headed next, desperate to impress her with this tale, figuring she'd love it. I most enjoyed getting to know the sixteen other wanderers through sharing the stories I'd collected.

I do apologise that this page on Where the Water Tastes Like Wine is nearly a year late. I didn't know the game existed. In fact, I first came across it via a postmortem which outlined some of the ways the designer felt it had both succeeded and failed, then didn't play it until I received a key. I loved it. If you enjoy games like Fallen London, and you're motivated by reading little passages of beautifully written words, this may be the narrative experiment you've been waiting for. I just wanted to hear what kind of tall tale people would spin about the lovers in the lighthouse next.

I thought you might come this way. Initiates enjoy partaking of the fountain before setting out on their tasks. Calms the nerves.
Trinket Seller
D'arc
Price: 5 Gold
It has magical healing properties.

EARLY 2019

MAGE'S INITIATION

DEVELOPER HIMALAYA STUDIOS • **PRICE** TBA
www.himalayastudios.com/games/mages/#about-the-game

How do you know it's a great classic adventure? Players ask questions like, "How do I collect sweat from the blacksmith?" Another test is how annoyed it makes my husband. "So we have to get sap from the tree but the tree won't help us until we get its fruit back, but the person who has the fruit wants a different fruit?" It's probably not for Ken but, if you're still reading, you've passed your first trial; Mage's Initiation is for you. Creative Director, Chris Warren, calls it, "an homage to Quest for Glory," and it's a surprisingly faithful representation of Sierra's late 80s titles.

D'Arc, after being taken from the family home as a child, must now complete trials before being initiated as a mage. By way of an intimidating interview, he is assigned to one of four classes; fire, earth, air or water. As in Quest for Glory, where a paladin approaches a puzzle differently to a thief, unique spells distinguish each mage's journey. Warren also mentions that this will be highly replayable, because side quests and solutions are also tied to class. He says, "We really liked Quest for Glory's class-based concept. Four classes seemed like a natural fit."

So, as an earth mage (because I'm a goody-two-shoes), I can talk to animals, manipulate features of the environment and cast pebbles, both in combat and to solve puzzles. How does a fire mage get the apple from the tree? I have no idea. If they have an equivalent spell to the one I used, they would have retrieved a baked apple and burned down the tree. The fact that I don't even know how the other mages approach real-time, action combat is intriguing, too. I mean, I cast earthquakes and pebbles. Perhaps the water mage can cast healing spells.

Yes, I could rush through the beginning again and learn more about the other classes pretty quickly, but it's fun to speculate. And I've become surprisingly attached to my version of D'Arc. Every character is voiced and there is a glut of dialogue options, which give puzzle hints as well as flesh out a detailed world, with its unknowable relics from a time long forgotten. Warren says, "Sierra fans appreciate game lore and attention to detail; the ability to play through a game quickly, while also being able to question NPC characters on a much deeper level."

He also mentions some more "outdated" features of classic adventures that Mage's Initiation leaves firmly in the past including, "moon logic, dead ends, stat-grinding and monotonous repetition." This is probably for the best. What they haven't left out, however, are large, desolate woodlands and wastelands. Not that they're bad, but do expect to draw maps. I was also punished for not taking notes, with long trips back to the mage tower's library to reread a clue. Or, of course, saving everywhere you might need to be is like a teleportation spell. Do that.

Mage's Initiation (of which I played only the demo; the first of three trials) is more faithful to classic adventures than I was expecting it to be. Warren mentions a desire to, "bring more interest to this unique niche of gaming," and I suspect that (despite that this game will never be for the world's Kens) the care taken to craft art, music and dialogue just might be appealing enough to draw people in. I hope so. This team is known for their Sierra remakes and Mage's Initiation was Kickstarted for a decent sum. I'd love to see what comes next for D'Arc.

RELEASED

FROG DETECTIVE: THE HAUNTED ISLAND.

DEVELOPER GRACE BRUXNER, THOMAS BOWKER • **PRICE** $6.50
http://frogdetective.net/

Frog Detective is like emptying a toybox onto the floor and then playing "pretend" with the world's driest, wittiest children. That's the only way I can describe it. I mean, there's a koala who's been floating in the sea for two weeks and you ask them if their feet are crinkly. They want a magnet so that they can catch a ride on a passing boat, but you really just need them to swap a magnet for their shell. Because another character needs the shell. And everyone needs something they don't have but will give you something else, with the eventual aim of making dynamite.

It's definitely an adventure game. And satire. If you're familiar with the genre, you'll know how spurious all of the reasons for finding new items can get. Frog Detective doesn't even try to pretend there's a good reason for doing anything, it just explores the art of conversation. Why are you giving the broom to the ghost-hunting sheep so that they'll give you wool? I honestly can't remember, but I'm still laughing about the fact that the sheep is grossed out by other animals wearing wool. And the sheep is wearing a jacket made of another sheep's wool!

Frog Detective delivers what it promises; a short (about 40 minutes long) mystery, set to engaging jazz, and with silly animations. It does have an ending, I promise; an adventure game cliche ending, even. And you get a magnifying glass with which to magnify things, and that's literally all it does…Unless I missed something. Somehow, I only got three out of six achievements. Personally, I'm hoping this is the first of a few episodes. I loved it. It's one for adventure fans who don't take themselves too seriously, or to play with the kids if the toybox has gotten boring.

INFLICTION

DEVELOPER CAUSTIC REALITY • **PRICE** $25
https://www.causticreality.com/

RELEASED

At PAX Australia last year, I had an assistant for the first time; Rob Hart. It was great. He followed me around the indie section taking notes and played Infliction in VR while I chatted with the designer. After a particularly bad jump scare, however, Rob disappeared for the rest of the afternoon, so it was with no small amount of trepidation that I booted up this game for review. Scary movies don't bother me too much, but the active engagement required to walk forwards into danger yourself, is more compelling. Like investigating a weird noise in the kitchen at 2am.

If you'd prefer not to be told a story about domestic violence, in which the consequences for heinous crimes is enigmatic, you may want to give this a miss. Otherwise, Infliction provides a detailed, classic, horror scenario, in which you explore, much like in Gone Home, examining objects and piecing together a string of nonlinear events. I particularly liked the changes made to the house in different time periods. There was a painting of a man guzzling wine. One time, it was hung, prominently, in a hallway. Another time, it was stashed in the basement.

Items that will help you progress glow, so you can find them. Most memories are voiced, which is an evocative touch. And there were moments that reminded me of how Ultima VII's Guardian gave me nightmares. I do like an enigmatic narrative but I'm not sure I understood everything that happened. The sound design reminded me of the sound in Duskers, too. You know something is close by, at which point you can hide, flick on a light, flash with the camera, or die. If Infliction seems like your thing, just play during daylight hours. PC

10 to Watch

1 World War Z

DEVELOPER: SABER INTERACTIVE
PUBLISHER: SABER INTERACTIVE
DUE: APRIL 2019
wwzgame.com

One of the most curious things about the World War Z the game is that while it is touted as being based on the Brad Pitt-starring film, it mentions nothing about the fantastic book that the film itself was based on – a shame, really, as the book is way better than the film. And, inevitably, the game is an even more distant adaptation.

Still, if you like mowing down zombie hordes (and we mean HORDES, with 100s of zombies on screen at once) while playing one of six classes in both co-op campaigns and an interesting, three-sided, player versus player versus zombies mode, this third person shooter may be for you.

2 Dance of Death: Du Lac & Fey

DEVELOPER: SALIX GAMES LTD • **PUBLISHER:** SALIX GAMES LTD • **DUE:** APRIL 2019
www.salixgames.com

There's a lot of interesting talent bound up in this adventure game based around the infamous Jack the Ripper and his murderous activities. There are actors from Torchwood, Penny Dreadful, and Game of Thrones providing voicework, and writers from Batman: Arkham Knight, with design talent coming from ex-Rocksteady and –Lionhead staffers.

Quite the pedigree!

The game lets you explore real Whitechapel locations, including the Ripper's various crime scenes. There are three playable characters from Arthurian myth (because, well… why not), and one of them is even a dog. So, you know, this is obviously Game of the Year material right here.

3

Colt Canyon

DEVELOPER: HEADUP • **PUBLISHER:** HEADUP • **DUE:** Q3 2019
colt-canyon.com

Sure, the greatest Western-related news this year is that the Deadwood movie is finally coming, but if you prefer to play cowboys than watch them, Colt Canyon may float your boat.

In this 2D roguelike you can play as either a cowboy or girl and take on a quest for vengeance as you track down the bandits that have kidnapped your partner. Playable solo or in co-op, you can stab, shoot, and blow up all who stand in your way, while picking up new weapons and ammo in randomised environments built around handcrafted levels. As you progress, you can unlock new characters and starting load outs, making this game as replayable as it is fast-paced.

4

Warhammer: Chaosbane

DEVELOPER: EKO SOFTWARE • **PUBLISHER:** BIGBEN INTERACTIVE • **DUE:** JUNE 2019
warhammer-chaosbane.com

I really want to start a clock that tracks every day that has passed since a new Games Workshop-based video game has been released, just so I can yell RESET THE CLOCK every time a new take on Warhammer comes out.

So. Uh… RESET THAT DAMN CLOCK!

Chaosbane can be best described as Diablo with a Warhammer Fantasy skin. It could also be described as an isometric take on Vermintide, as you can play the game cooperatively with up to four players. There are four classes to choose from, a Bloodlust mechanic that unlocks truly hyperviolent powers, and everything you'd expect from click-to-kill game like this. Note to self: buy a sturdy mouse.

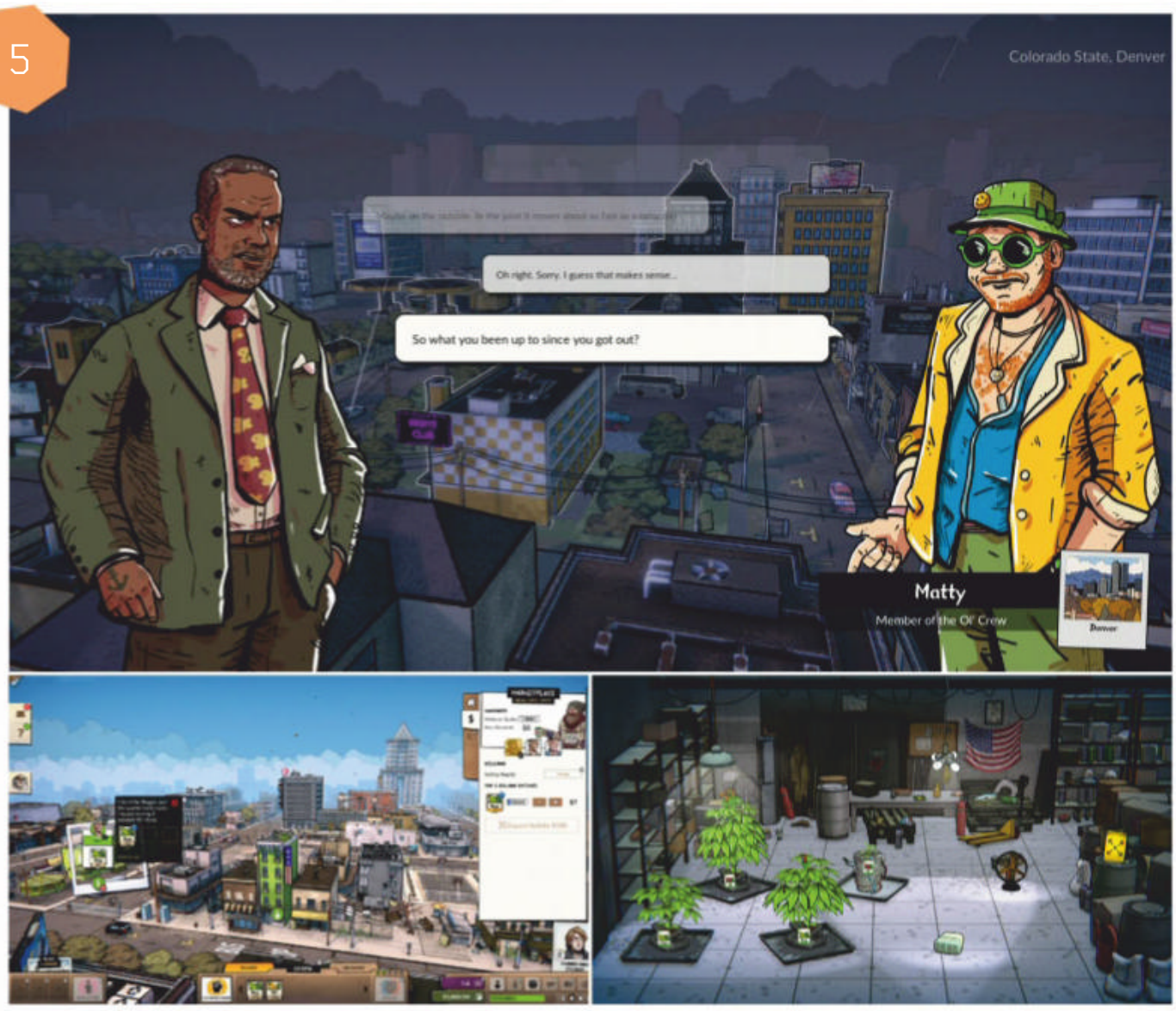
Weedcraft Inc

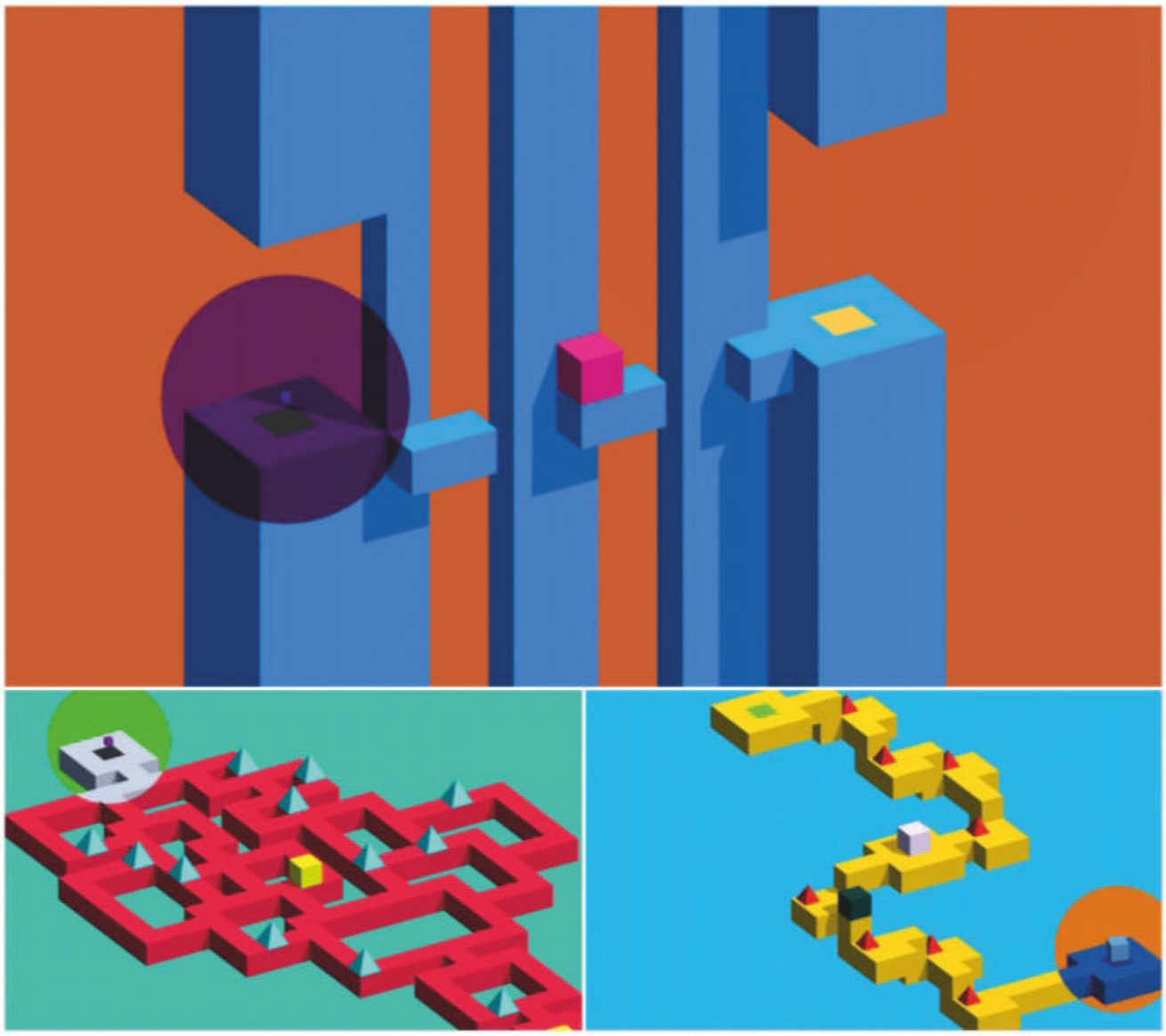
5

DEVELOPER: VILE MONARCH
PUBLISHER: DEVOLVER DIGITAL
DUE: APRIL 2019
weedcraftgame.com

Given Australia's rather strident policies when it comes to games providing in-game benefits to the use of illegal drugs, the chances of Weedcraft Inc getting a classification here are a little slim. Which just heightens how silly our drug laws are when compared to many other country's changing outlook on marijuana.

Anyhoo, Weedcraft Inc lets you run a legal weed selling and growing business in a Tycoon-style simulation that offers you a wide range of challenges. Not only do you need to cultivate and then sell the best product, but you need to navigate changes to the law, dealing with law enforcement and politicians, and a range of other interesting characters. And of course you'll need to work out how far you want to go to succeed… how many laws do you want to actually break?


Colorado State, Denver
Oh right. Sorry. I guess that makes sense...
So what you been up to since you got out?
Matty
Member of the Ol' Crew



6

Vectronom

DEVELOPER: LUDOPIUM
PUBLISHER: LUDOPIUM
DUE: Q2 2019
www.vectronom.com

This kinda looks like a game that might go well with the products from Weedcraft Inc! Vectronom is a pattern and rhythm-based puzzle game that challenges you with navigating a leaping cube through various ever-changing levels.

One of the most intriguing aspects of the game is that it can be hooked up to alternate controllers, such as dance pads or even midi-instruments. The game can also be played in coop mode, and comes with a level editor to create your own mindbending challenges.

7

SpellForce 3: Soul Harvest

DEVELOPER: GRIMLORE GAMES • **PUBLISHER:** THQ NORDIC • **DUE:** Q2 2019
spellforce.com

While this one is an expansion to Spellforce 3, Soul Harvest can at least be played standalone. The game adds two new factions – the beardy and often drunk dwarves, and the rather more evil dark elves (neither at all influenced by Warhammer or DnD, no sir, not one bit). There's also a story mode campaign that offers 20 hours of gameplay, heroes with deep skill trees to unlock, flying units, and a new sector-based RTS system.

And we have to admit – it does all look rather pretty.

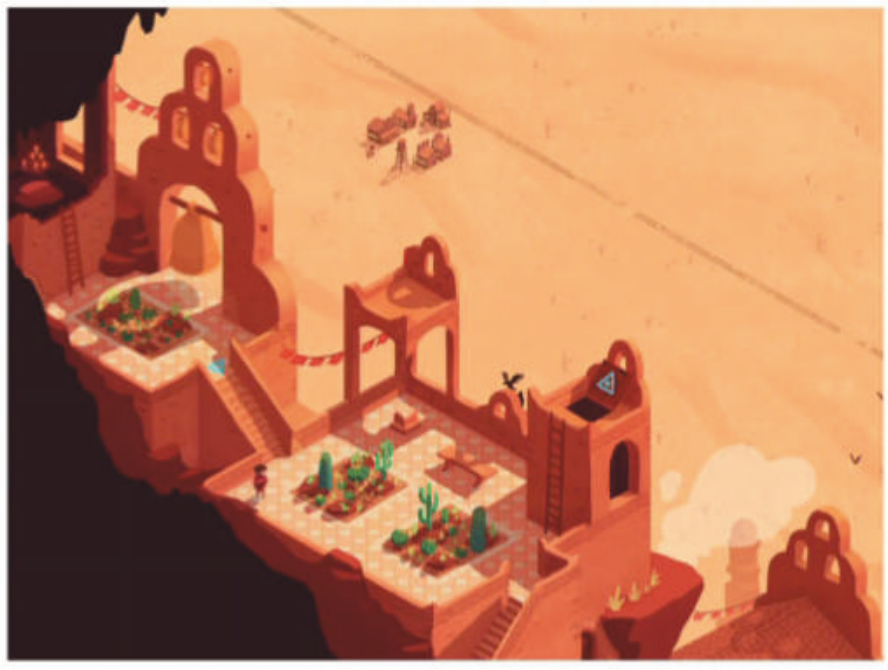
El Hijo

8

DEVELOPER: HONIG STUDIOS • **PUBLISHER:** HANDYGAMES • **DUE:** MID 2019
www.elhijogame.com

Well slap me with a riding crop and call me a horse – here's another top-down western game. This time though, though the spaghetti is thick, one element of that venerable genre has been excised from El Hijo – violence.

You play a six year old child left at a monastery, and must break out into the world to find the mother who left you there. You're armed only with a slingshot, and must find non-violent, stealthy solutions to every problem. You'll need to navigate the monastery, the desert surrounding it, and a villainous town on your mission, and each environment has ten levels to defeat.



9

Moving Out

DEVELOPER: SMG STUDIO
PUBLISHER: SMG STUDIO
DUE: Q2 2019
www.smgstudio.com

Okay, so a game about being a furniture removalist may not sound immediately thrilling, but this moving sim looks like it will truly beat expectations.

You start out moving simple furniture such as couches and chairs, but you're also going to accidentally destroy a lot of stuff, as prompt delivery is the only end-goal. Oh, and you'll also be robbing stuff, repossessing other stuff, and even moving even more stuff during events like floods and avalanches and yes even escaping a rolling boulder.

The games looks like perfect dumb fun.

10

Chook & Sosig: Walk the Plank

DEVELOPER: TOOKIPALOOKI • **PUBLISHER:** ARMOR GAMES STUDIOS • **DUE:** 2019
armourgamesstudios.com

w Chook and Sosig is an oddball point and click adventure, the latest in a series that starts with A Case of Murder, Hit the Club, and Long Weekend. Made by a one-woman studio in New Zealand, Chook and Sosig is about the two titular characters' efforts to start a tabletop roleplaying campaign with a cast of weird characters, including a dead chicken, spaghetti cat, and… yeah.

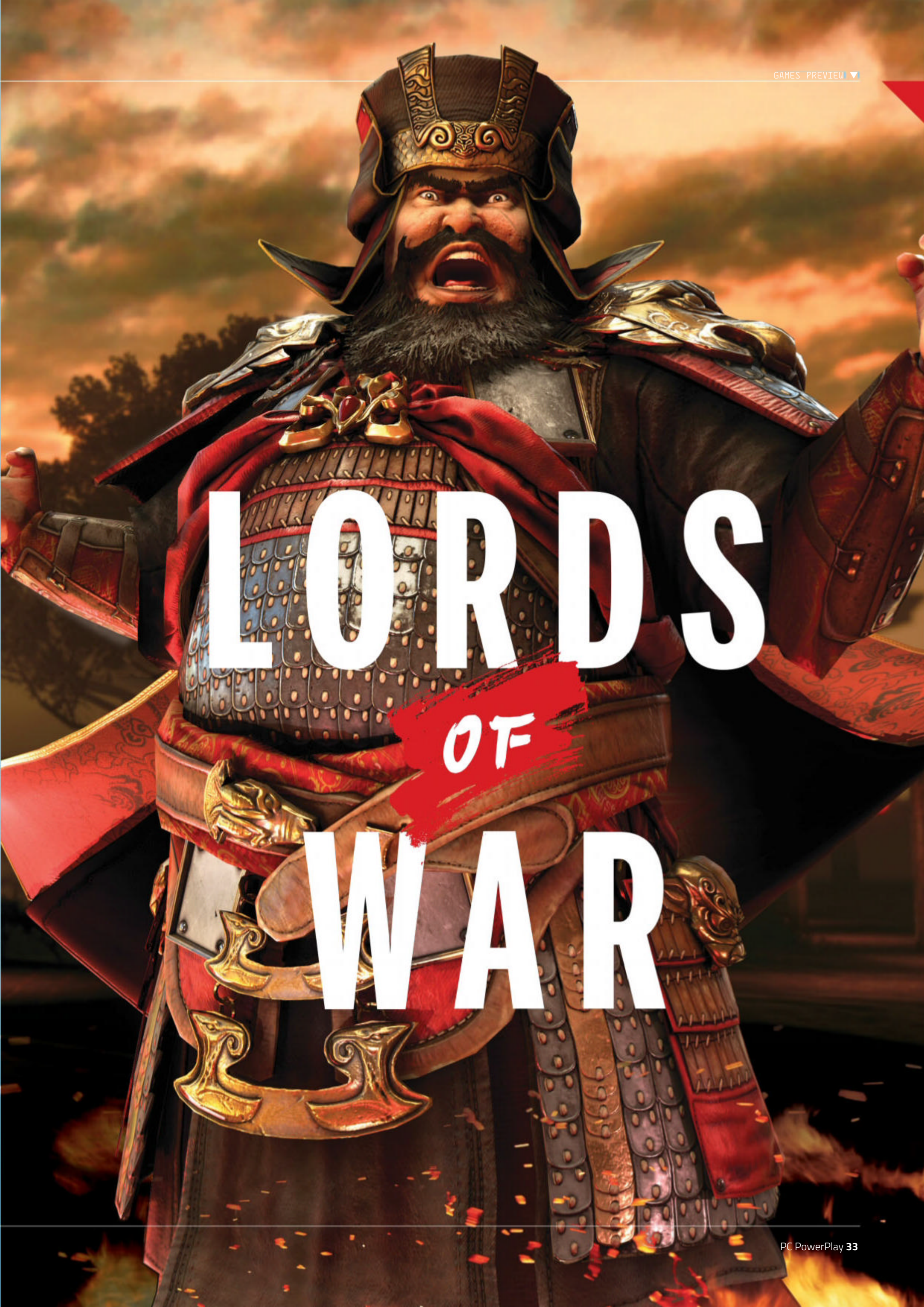
DONG ZHOU IS A **BAD MAN.**

THE 11 PLAYABLE WARLORDS OF **TOTAL WAR: THREE KINGDOMS** ARE DIVIDED INTO CATEGORIES WHEN YOU START A CAMPAIGN.

DONG ZHOU HAS A CATEGORY ALL TO HIMSELF CALLED, SIMPLY, **TYRANT.**

三國

By Tom Senior



LORDS OF WAR

The Three Kingdoms campaign is set in ancient China, 190 AD. The Han dynasty has collapsed, and Dong Zhou has captured the child emperor. Now the warlord lurks in the palace, bullying anyone who stands against him. Every cruel overlord needs a Darth Vader, so Dong Zhou convinces the greatest warrior in the land, Lü Bu, to slay his own foster father and become Dong's enforcer and heir. The resulting family dynamic is… difficult.

At a glance, the Total War formula appears unchanged. On the turn-based campaign map you guide your faction's research, upgrade settlements with new buildings, conduct diplomacy, and move armies around like pawns to capture enemy settlements. When armies clash, you can take charge of your forces in huge real-time battles set in gorgeous battlefields. However, after a few turns, I discover that there is a lot more to think about. How do I keep Lü Bu's arrogance in check? How can I negotiate safe passage for my armies with a nearby warlord, so I can crush an uprising of the yellow turban rebellion? How do I hold off the remnants of the Han dynasty and their allies to the east and the south?

The alliances of the era are so tumultuous that Creative Assembly has had to rebuild Total War's entire diplomacy and AI system almost from scratch. In addition to typical military alliances, you can form coalitions that don't tie you into complete military co-operation. There are different flavors of vassalage too, and many new ways to undermine and betray other warlords. The diplomacy screen lets you trade goods, alliances, military access, and treasures in a detailed tit-for-tat exchange. For a few turns of my game, several warlords approached me about acquiring a lovely clay bear I managed to plunder. I gave it away for a series of regular payments and put the money into trebuchets.

"The previous system in previous titles was a little bit too old now," says associate designer Nicholas Graber. "We applied so many patches, so many improvements, we basically wanted to rewrite it.

"So we have a new diplomacy system which is supported by a mostly data-driven AI. It makes development much easier and faster as well. Apart from, obviously, offering a lot more options, it gives us a lot more flexibility. We can come up with new diplomatic options and implement them much quicker."

It might seem odd to bring a strong diplomatic focus to a game called 'Total War', but Three Kingdoms is interested in different notions of how power really works. For Dong Zhou, it's bullish authoritarianism, backed up by military might. But if you play as Cao Cao you're a master of manipulation. You can turn heroes in other factions against one another, and specialise in using spies to create civil wars. Some warlords are good at bringing people together in alliances, which becomes useful later in the campaign as warlords ally to form huge factions.

ZERO TO HERO

Your goal is to ultimately unify China under your warlord's banner, but in this period China is shattered into fragments of territory. Historically, a period of fierce localised scrapping led to the emergence of the three kingdoms: Wei, Wu and Shu. The leading figures of the period were captured in Luo Guanzhong's epic 14th-century novel, Romance of the Three Kingdoms. This is the version of the history we see featured most often in games. Total War: Three Kingdoms aims to strike a balance between Romance and history with characters that are powerful, but not outright magical.

"Ancient China is almost the perfect setting for a Total War game, in a lot of ways," says writer and narrative designer Peter Stewart, "because of the scope of the whole thing. 30 million people died over the course of it, and when you're making a game about war, that's seems like a perfect setting.

"And then there are the characters as well, who all step into this vacuum of power that's created when the Han dynasty collapses, which is exactly what we wanted to focus on: How those characters defined the era."

> "Ancient China is almost the perfect setting for Total War."

Heroes have personality traits, and they can form relationships with other heroes they fight alongside (or against) in battle. In time disagreements can become outright rivalries and heroes can defect to join another faction or create their own. The devs say that you will probably be able to let lesser heroes go, but betrayal from major characters in your faction — heirs, and others who hold titles — may prove devastating to your campaign. The relationship system works in the other direction, too. If two best friends go into battle and one of them dies, the other may fly into a rage for the rest of the fight, and enter a period of mourning after the battle.

You even build armies around your heroes. You can have three in an army, each taking a retinue of up to six units

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China's natural environmental variety has inspired the prettiest campaign map yet.

into battle. Heroes come in five flavors. Strategists can debuff enemies, commanders can encourage allies and reinforce a line, vanguard heroes are good fighters who can disrupt a line, sentinels mostly refuse to die, and champions excel at hunting down enemy heroes and duelling them to death.

Given how powerful they are, it pays to have your leaders in the right place at the right time. In Lü Bu's case, that's in the midst of a hundred enemy archers hunting down their general.

A battle to take back a fishing village south of my empire has escalated quickly, and I have just realised that I'm heading for a direct clash with Cao Cao in nearby territory. Lü Bu is working alongside a commander who gives nice boosts to my archers and lets them use flaming arrows, and a strategist who stands around looking regal a safe distance away from the fight. Though your army is organised into three retinues, you're free to command all of your units however you wish — they don't have to stay near their hero. I push up my flame arrow archers and instruct my trebuchets to sling buckets of what the description text charitably calls 'ichor'.

Then I unleash Lü Bu. I have hidden him in a forest on the right flank, with a couple of units of cavalry. They burst from the trees and slam into the enemy's contingent of archers, sending men flying. I select Lü Bu, click on the 'duel' command, and challenge their leader to a one-on-one fight to the death.

He accepts. The archers and my cavalry back away and form a respectful circle to give the two heroes space. Lü Bu charges, but his attack is deflected. He jumps off his horse and engages in some spectacular martial arts action. The fight goes back and forth. One minute Lü Bu has the upper hand, the next he's sent flying by a counter-kick to the stomach. I suddenly realise I have a battle to run, so I zoom the camera back out and tell my trebuchets to target their demoralising poop buckets at the fight near the duel.

With a thrust of his weapon Lü Bu finishes the fight and charges into the archers. I don't remember a part of the Romance of the Three Kingdoms where Lü Bu bests a hundred men in a shower of shite, but Total War is all about making your own stories.

The enemy morale breaks, and they flee the field, but not before my

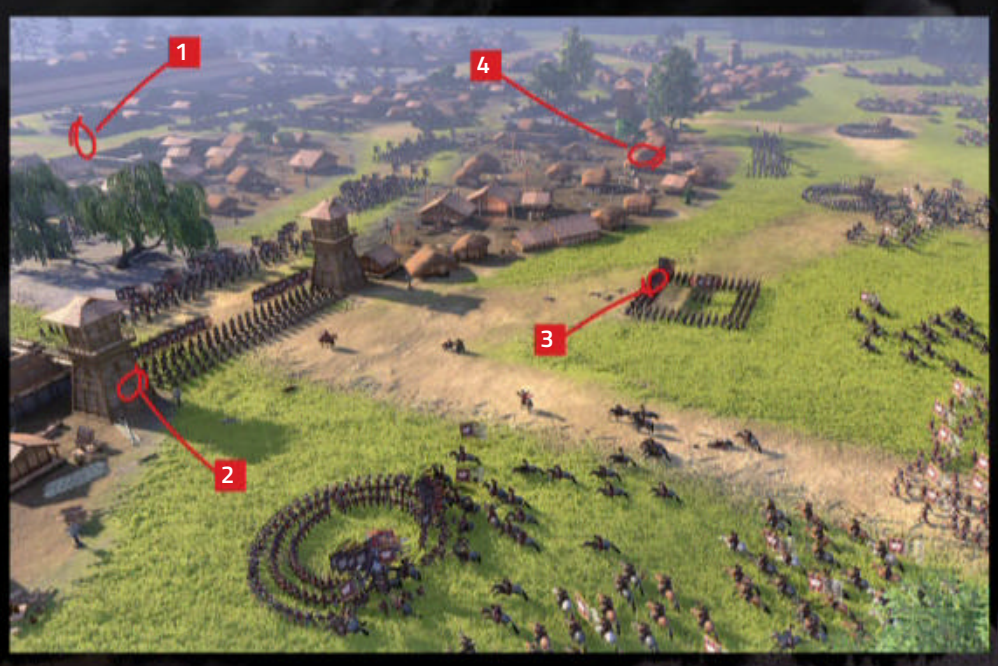
SIEGE MENTALITY **SOME SETTLEMENTS WON'T GO DOWN EASILY**

1 To take the town attackers must rout the defenders or capture a zone at the town's heart.

2 Guard towers provide fire support to defenders, helping them to fend off larger numbers.

3 Some heroes unlock special formations for certain units.

4 Settlements catch fire as attackers breach the outer line.

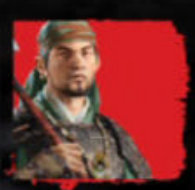


strategist is mobbed and killed. The heroes talk to one another throughout, so I can tell the cocksure Lü Bu didn't especially like my strategist. It may have seemed to him that the strategist wasn't working hard, but with help from my commander hero, he held the line in the face of greater numbers while Lü Bu was charging around breaking the enemy. Before battles even start, as the game loads, characters chat about their chances in the fight ahead. I'm sure the lines will eventually become rote, but it demonstrates how much CA want heroes to be more than a series of stats pages.

With the battle done, I'm free to face off against Cao Cao. I've played three hours of two campaigns, one with Dong Zhou, and another with the oathsworn brothers Liu Bei, Guan Yu, and Zhang Fei. I found that your warlords affect your approach to the entire campaign, not just battles. Dong Zhou has the emperor, which means he has a legitimate claim to a lot of territory. He also has his own resource: Intimidation. When you raze settlements and execute heroes you earn intimidation points, which you can cash in during contact with other warlords to essentially bully them into saying yes. Writer and narrative designer Pete Stewart refers to this as the moment you slam your sword on the table and ask them to rethink their life choices.

LEAGUE OF LEGENDS **MEET A FEW OF YOUR WARLORD RIVALS**

YUAN SHAO
CLASS: Commander
LIKES: De-escalating conflict with his gaze
DISLIKES: The power of Dong Zhou



ZHANG YAN
CLASS: Champion
LIKES: Moving through woods quickly
DISLIKES: His poor starting position

ZHENG JIANG
CLASS: Champion
LIKES: Banditry and extortion
DISLIKES: That the Han dynasty isn't on fire yet

KONG RONG
CLASS: Strategist
LIKES: Destroying you in a battle of wits
DISLIKES: Being destroyed in a battle of swords

FAMILY MATTERS

The brothers start in a very different position. They have no territory, and must scrape back some holdings from the yellow turban rebellion — a vast peasant uprising that was brutally crushed at the time. Though they lack land, their coalition is the most powerful starting army in the game, thanks to the three heroes that lead it. Still, it's tough to cling on to a

> "Your warlords affect your approach to the entire campaign"

scrap of territory as warlords vie for power around you. In both campaigns, civil unrest and enemy attacks made it difficult to get a foothold. It's a symptom of the AI's proactive stance. Other warlords get in touch to ask for favors, or to try to bully you for goods or territory.

"It was one of our main goals to make the AI a real threat to the player," says Graber. "I wouldn't say we made the AI much more aggressive, but it's more active than before. If you have bad relations with the AI you should be prepared for a war. Once a war declaration happens, you should be prepared for an actual attack and lots of battles. We wanted to make sure the AI follows through. The war declaration should be followed by battles."

And so I find myself facing Cao Cao to the south of my empire. Though Lü Bu had ensured victory at the fishing village, I'd taken losses. My army is at half strength, and I'm down a strategist. In a fit of frankly terrible strategic decision-making I decide to put Dong Zhou himself into my army, partly to see the big man in battle alongside his violent foster son Lü Bu, and partly because he can take a couple more trebuchets in his retinue. Maybe I'll select the option to fling rotten horses at the enemy this time instead, to fatigue Cao Cao into submission.

This does not work. As I try to take another settlement to the south Cao Cao's huge army attacks. The pre-battle screen tells me it's hopeless. My chances are zero. I retreat my army, put them into marching stance, and instruct them to run as fast as they can up the river.

It's too late. Cao Cao's army runs me down and defeats my army easily. Then a series of messages pop up. This is what it looks like when an empire implodes in Three Kingdoms.

One: My brutal ruler Dong Zhou is captured by Cao Cao. Two: Cao Cao executes my brutal ruler Dong Zhou. Three: Lü Bu is the new brutal ruler of my empire. Four: Senior figures in my administration, Guo Si and Li Jue, hate Lü Bu and have decided to defect and form their own faction. Five: a civil war has broken out and is tearing my

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LEFT: The campaign map now has a day/night cycle.

territory in two. Oh, and the yellow turban rebellion is there, too, burning things down and causing a fuss.

I have a feeling Cao Cao may be one of the more powerful warlords, as he should be. Creative Assembly has a fun way of testing the balance between warlords. As you're reading this, there's a chance that some computers inside Creative Assembly HQ are waging war against themselves. The developers call it 'autotesting'. The AI battles itself, and CA harvests the data to make balance tweaks and check the shape of the campaign.

REBEL ALLIANCE

"What we see in the first half of the game is power groups emerging from coalitions and alliances," says Graber, "and these power groups are usually at war with each other. In the later stages of the game you have multiple emperors facing each other; self-proclaimed emperors trying to beat each other. That's the boss fight, in a sense."

> "It's a chance to take the events of history in a different direction entirely."

It turns out I've only seen the chaotic opening stages of a Three Kingdoms campaign. The really big fights happen later on, once huge power blocs have formed. Though it's a true sandbox, Creative Assembly hopes that campaigns will tend to result in three huge factions led by wannabe emperors.

"There's a lot of data we can look through and see how different factions perform," Graber explains, "which one's the strongest, which one dominates too much, so we try to balance it of course.

"The biggest factor we can't take into account in that specific testing scenario is the player. The player can take out our strongest faction in the autotest straight away in the game and suddenly the game the player will have is completely different to what we're seeing in testing."

I ask the team if the yellow turban rebellion ever wins. Everybody laughs. The peasant revolt was brutally suppressed in the years leading up to Three Kingdom's 190 AD start date. Now it's a preorder bonus faction in a videogame in 2019. History is hard on the losers.

My time with the campaign runs out. I could have spent ten hours trying to undo the mess I'd made, but I came away realising I'd made too many mistakes. For most players, I think the start of a Three Kingdoms campaign is going to be completely baffling. There are so many warlords and characters to understand, and though the information you need is right there on character screens, it takes effort to process it all and get a sense of where you stand with your neighbors. The game gives you some starting missions to provide focus, but I can see myself having to play a few abortive campaigns before I really start to get a sense of how heroes' personalities play into the game's sandbox.

There's so much more I've yet to properly explore. The Wu Xing philosophy of five elements runs through the entire game. Every hero and building upgrade matches the colors of water, wood, fire, earth, and metal. Some elements

GEAR OF WAR

LOOKING AFTER YOUR WARLORDS

1 Equip heroes with different gear and mounts to make them more powerful.

2 Assign followers to improve your warlords' performance.

3 Level them up and use skill points unlock new abilities on their skill tree.

4 Give them titles and assignments to keep them happy, and loyal.

are complimentary, others work against each other. The designers use champions and strategists as an example. Red, fiery champions are destructive on the battlefield, but they are doused by the draining abilities of a blue water strategist. The effect is subtle — these heroes of Chinese legend aren't Pokémon, after all — but CA is using the framework to make the game instinctively readable, and to bring nuance to Three Kingdoms' presentation.

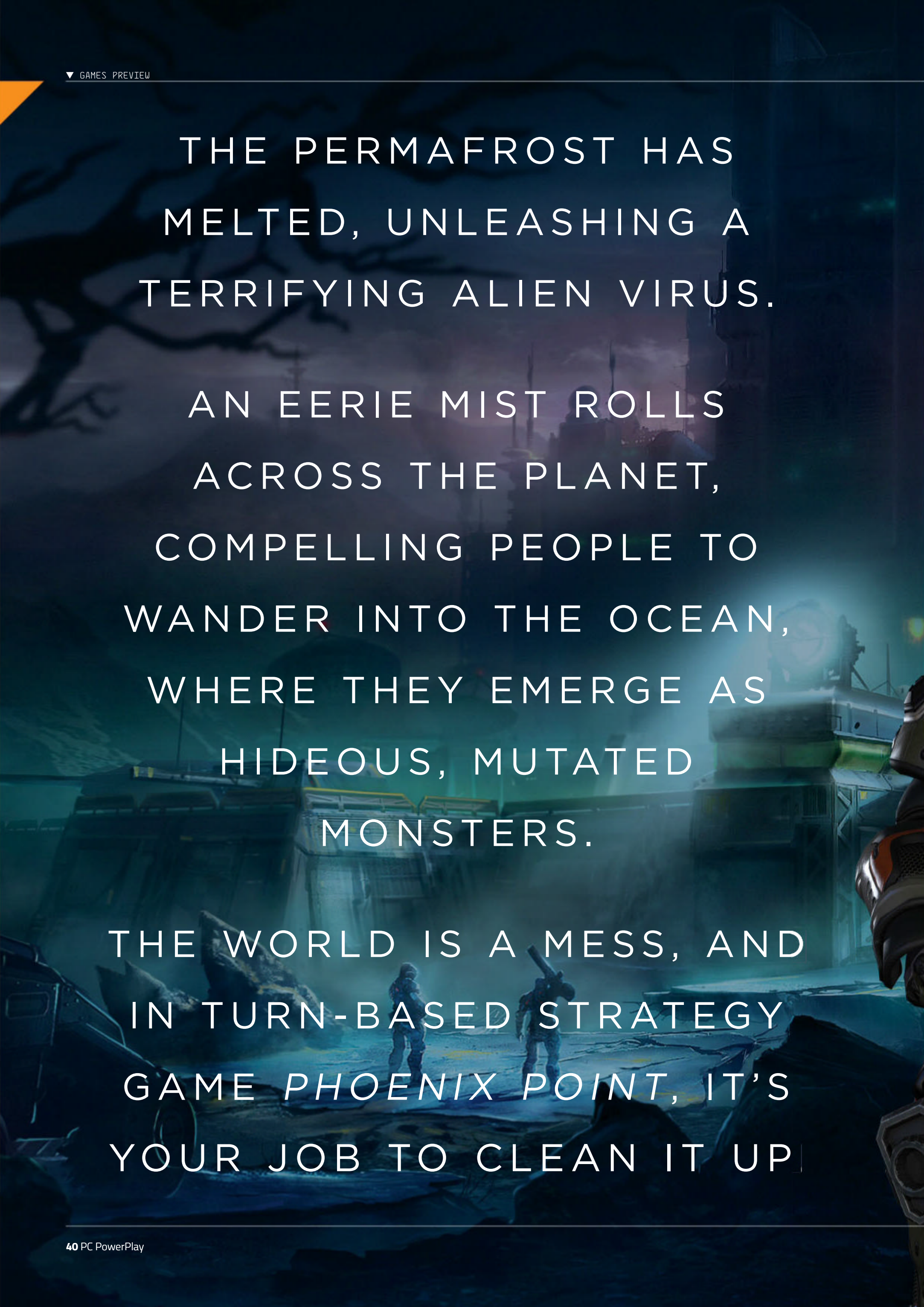
ELEMENTAL

It's worth mentioning how beautiful Three Kingdoms is. This is the best looking Total War to date. The tech tree is a tree painted on canvas. When you unlock a node — a taxation bonus, or a military mustering boost — that section of the tree bursts into pink blossom. The UI has been reworked to be more elegant, with splashes of blank ink that evoke the brushstrokes of Chinese calligraphy. The map fades into a watercolor painting as you zoom out.

The warlords' character portraits even reflect their elemental alignments. Lead character artist Mauro Bonelli talks about how colors and motifs in a character's clothing express their character. Cao Cao is shown in ambiguous colors that could reflect stone, wood, or metal — fitting for a masterful manipulator — but with flashes of red that imply military prowess.

And what about Dong Zhou? Historically, he was killed by his foster son Lü Bu, but what if he managed to keep his retinue in check? He may well have extended his reach and brought all of China under his tyrannical rule. That's the promise of Total War; it's a chance to take the events of history in a different direction entirely. Close the magazine and take a look at the image of Dong Zhou on our front cover. This man who would raze a town or execute an official without a second thought. If he came into your home, demanded fealty and slammed his sword down on the table, would you say no? PC

When you capture a hero you can execute them, release them or convince them to join you.



THE PERMAFROST HAS MELTED, UNLEASHING A TERRIFYING ALIEN VIRUS.

AN EERIE MIST ROLLS ACROSS THE PLANET, COMPELLING PEOPLE TO WANDER INTO THE OCEAN, WHERE THEY EMERGE AS HIDEOUS, MUTATED MONSTERS.

THE WORLD IS A MESS, AND IN TURN-BASED STRATEGY GAME *PHOENIX POINT*, IT'S YOUR JOB TO CLEAN IT UP.

FROM THE ASHES

Rebuild a broken world in **PHOENIX POINT**, a bold new sci-fi strategy game from the creator of the original *X-COM*.

By Andy Kelly

When the game starts in 2047, most of humanity has been killed, abducted, or transformed into alien monstrosities," says lead designer Julian Gollop, who is perhaps best known for creating the original X-COM series. "But there are a few isolated groups that have managed to survive."

"The Phoenix Project organisation you're the leader of is very diminished," he says. "You're being attacked on all sides by various different powers. But out of the ashes of the devastation of the virus, which comes to be known as the Pandora virus, there comes a number of charismatic leaders who claim their factions will be able to rebuild the world and make it better."

Julian Gollop has been making strategy games for decades, from Laser Squad and Rebelstar Raiders in the '80s, to the legendary X-COM series in the '90s. That's the old X-COM, with a dash after the X, rather than Firaxis' recent (and equally superb) reboot, XCOM. But Phoenix Point seems to be bigger, grander, and more ambitious than anything he's done before, and I ask what inspired him to start the project.

"I wanted to pursue what I call my vision of a grand strategy game, which involves tactical turn-based battles as well as a wider strategic conflict," he says. "I love this multilevel, multiscale aspect to strategy games, which is heavily influenced by some of the board games I used to play when I was much younger. Before computer games existed, in fact.

"I also wanted to revisit some of the ideas I was developing in the original X-COM series. For example, in X-COM: Apocalypse there was this idea of a living city with multiple factions that you had individual relationships with. This was something I wanted to explore a lot more."

DEAD RISING

Gollop also wanted to bring back the feeling of dread and tension that permeated the X-COM series—of never knowing what horror lies around the next corner, or if your squad will make it out alive. "That was very much a part of the tension and excitement of the tactical battles," he says. "In Phoenix Point, we have a mutation system that can generate hundreds of enemy variations, so you are never sure what you're going to be facing.

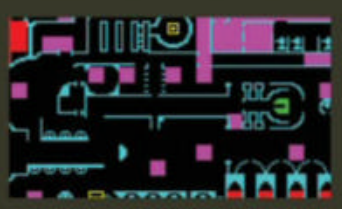
"I also wanted to bring some of the RPG elements from the original X-COM to Phoenix Point," Gollop continues. "That sense that you're creating and nurturing a squad and carefully building them up to a force that's going to save the world. We want the player to have to decide whether they're going to risk their best soldier in a battle, or save them for when things get tougher later."

While the core of the game will be its tense, deep, strategic combat, story is also an important factor. But it's more than just window dressing: It actively informs the flow of the game, and how you interact with the various parties in it: Be they friend, foe, or a

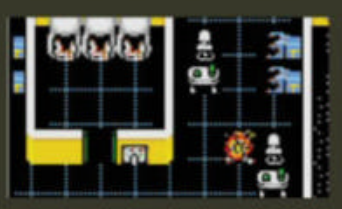
"Gollop also wanted to bring back the feeling of dread and tension that permeated the X-COM series—of never knowing what horror lies around the next corner, or if your squad will make it out alive."

LEFT: You will need to make use of the free aim system to take down these beasts.

MEMORY LANE JULIAN GOLLOP'S GREATEST HITS



REBELSTAR RAIDERS
1984
An early turn-based strategy game, *Rebelstar Raiders* is a multiplayer sci-fi game where players control opposing squads of soldiers.



LASER SQUAD
1988
Another turn-based game, this time featuring a variety of tactical missions including assassination, hostage rescue, and infiltration.

UFO: ENEMY UNKNOWN
1994
Also known as *X-COM: UFO Defense* in North America, this was the world's first taste of what would go on to become a hugely popular series.

X-COM: APOCALYPSE
1997
A deeper, more complex take on *X-COM*, with self-adjusting difficulty and rival factions, including the alien-worshipping Cult of Sirius.

CHAOS REBORN
2015
A remake of *Chaos: The Battle of Wizards* (an early Gollop project), this strategy game features warring wizards and challenging combat.

Combat is vital, but there are other ways to solve problems too.

bit of both.

"We've spent a lot of time building the world," says Gollop. "We've produced a number of short stories for [crowdfunding] backers, which have been well received and give the game a rich backstory. In the game, much of the story will be revealed through the research system — as it was, in fact, in X-COM. And there are the factions, who have different ideas about how to save the world."

New Jericho is a faction led by a powerful leader named Tobias West. He was, before the outbreak, the CEO of a major arms manufacturer and private mercenary group, and has created a militaristic society where soldiers have high status. If combat's your thing, side with them.

"Everybody is expected to serve in West's personal army, and their approach to the Pandora virus is that it has to be eliminated by eternal vigilance," says Gollop. "So they're very strict about killing infected people, and any trace of the infection they detect is dealt with without prejudice. Tobias West is firmly against any kind of corruption of the human genome."

CULT HIT

Very much opposed to New Jericho is the creepy, cultlike Disciples of Anu, a religious order which believes that an alien godlike figure has come to save the Earth in the form of the Pandora virus and its mutations.

"They think that if they embrace it, they'll evolve with it," says Gollop. "They've developed a technology that lets them contain the virus so that anyone infected doesn't become completely alien, which they think will allow humanity to become better than itself. The downside is that a lot of these experiments fail, causing a lot of death and suffering. But people join them because their leader, the Exalted, is highly charismatic. She's a mutant herself and has these powers, showing people what they could become."

And then there's the Synedrion, a highly ecological, anarchistic alliance. The have a technology that allows them to repel the virus, and believe they can reclaim the land — even if the seas are still infected — and rebuild society. "They want a society built on freedom, democracy, and other ideals they think have been neglected by previous civilisations. They think trying

Phoenix Point will feature both infantry and vehicle combat.

> "You do have a lot of choice in what battles you pursue."

to completely defeat the alien menace, like New Jericho is trying to do, is a futile task."

All three factions have their own agenda, technology, and solutions to the alien menace. And you, as an independent party, can use different, often risky methods to get this information. "You can ally with a faction, defending their settlements to curry favor," says Gollop. "Or you can attack them and just steal their resources and technology.

"You can also trade and exchange research and technology peacefully. So that aspect of the game, including from a storytelling perspective, is a lot richer than X-COM. We also have plans for the story beyond even this first game, about what happens next in the world of Phoenix Point."

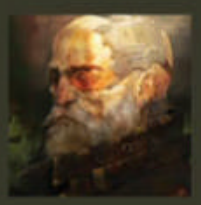
The beliefs of the factions means you'll be navigating dangerous diplomatic waters. "Your actions will have consequences and could lead to a faction turning on you," says Gollop. "But if they're under attack and you choose to intervene, they might trust you more. However, if you defend a Disciples of Anu base and not a Synedrion one, because you're more interested in forming an alliance with the former, the latter may react badly."

You also have to consider the structure of each faction before you go charging in looking to make a deal. "With the Disciples of Anu, you can't just march in and talk directly to the Exalted. You have to progress through several levels of their, let's say, priest hierarchy to reach her. The Synedrion are changing leadership a lot, as they're

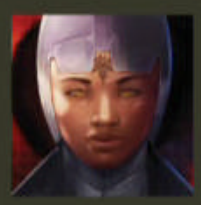
SIDE BY SIDE

THE FACTIONS YOU'LL MEET IN PHOENIX POINT

DISCIPLES OF ANU
A religious order which believes that weaponising the Pandora virus and its mutations is the key to rebuilding the world. The virus was, according to its scripture, retribution for humanity's sins.



NEW JERICHO
A militaristic faction, New Jericho's goal is destroying the Pandora virus and reclaiming the planet. It believes in human purity, rejecting any form of mutation and restoring order through force.



SYNEDRION
This faction believes that, having learned from past sins, the world can now be rebuilt as a utopian society, with renewable energy, freedom from persecution and a focus on developing science and technology.

having these internal debates, so you might talk to different people with different demands."

And the faction you side with, if you decide to side with one, can also directly affect how you win the game. "Each faction has its own solution to the alien menace," says Gollop. "They haven't developed it at the start of the game, however, so you can choose to ally with one of them and work with them to achieve their goal. There's also a fourth solution to the game besides siding with one of the three factions, which you can pursue without creating any alliances, but it's more difficult to pull off."

The game's tense turn-based combat will have you making equally interesting and important decisions, albeit on a smaller, more immediate scale. One of the most exciting features is how, thanks to the weird mutating properties of the Pandora virus, enemies are procedurally generated from dozens of different parts, and you're never sure what it's going to throw at you next.

"The alien mutation system works at a strategic level," says Gollop. "For example, there are arthropod-type enemies with primitive claws and shields. But if you beat them a few times, and decisively, they'll go through a mutation process. So next time you face them, they might be able to use human weapons, or develop different types of attacks such as poisons. And the more they defeat you, the more successful the mutation will be. This will require players to constantly change and adapt their combat tactics in battle."

Another interesting feature is the free aim system. Similar to VATS in Fallout, this lets you target specific body parts of an enemy, opening up a realm of tactical possibilities. "This is important tactically because a lot of the aliens' abilities stem from their various mutated body parts," says Gollop. "If you have, say, a crab-type enemy with a shield and a gun, you can disable its arm to knock the gun out of its hand, which limits it to using a close-quarters shield bash. Some mutations have weak spots to deal extra damage, too. If you attack an enemy's leg, it might stop it from moving as quickly.

"When you're fighting a monster, the free aim system is more important than ever," Gollop adds. "They're like organic battleships with multiple weapon systems and you have to try and pick a strategy based on that. Do you want to take its weapons out? Or focus on the most vulnerable part of its body? These things are all a very important part of your tactics in battle."

ABOVE: This post-apocalyptic Earth is a grim place, but you can save it from total destruction.

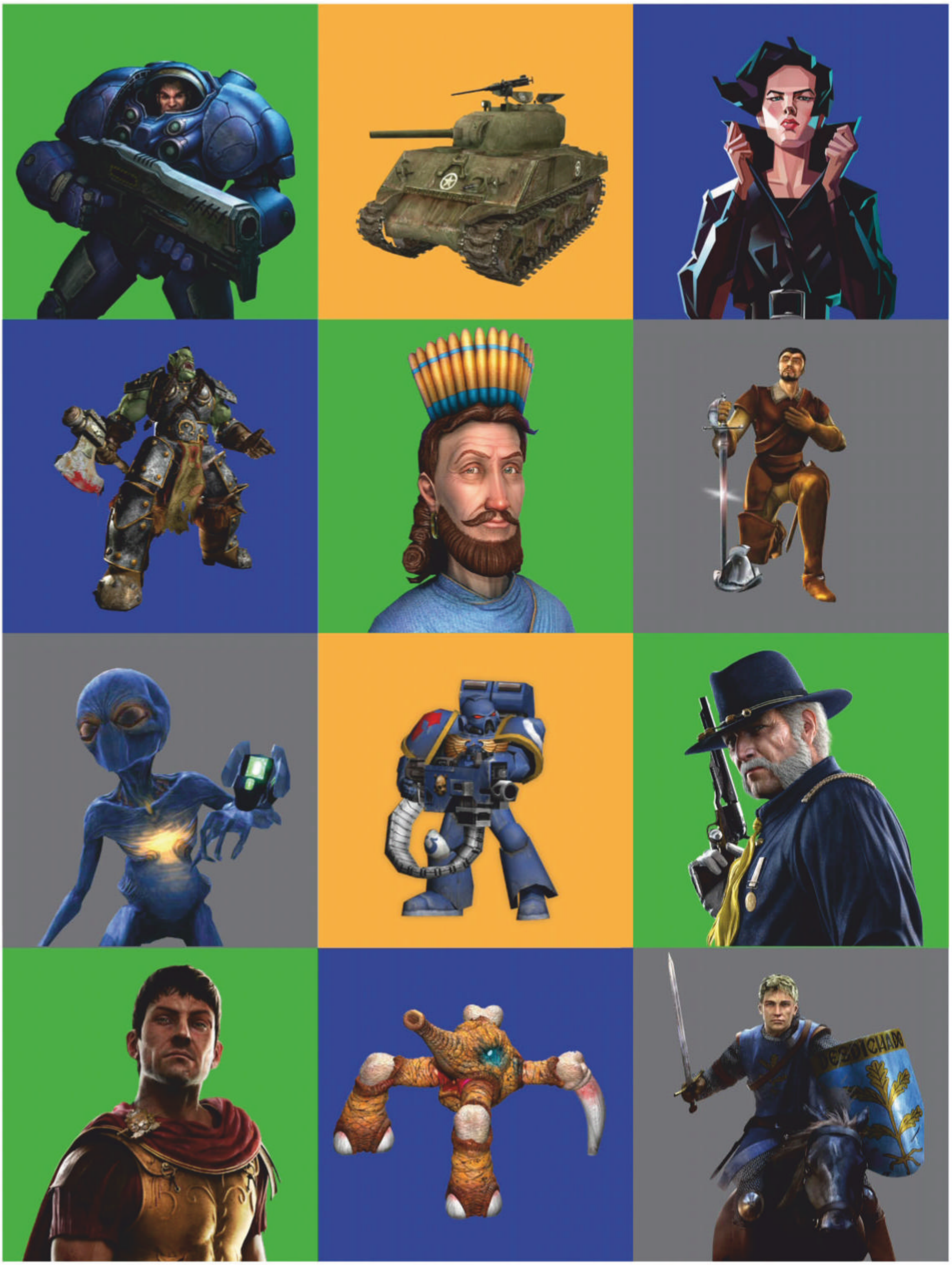
BELOW: The mutation system means you never know what enemy will come at you next.

PICK AND CHOOSE

Grand strategy games are obviously an influence on Phoenix Point, and I wonder if players who want to focus on that side of things can choose to automatically resolve battles. "You can't automate battles, because they're really the essence of what the game is all about," says Gollop. "However, you do have a lot of choice in what battles you pursue. It's a much more free-form mission system than you'd normally find in a game like this. You can instigate battles if a faction has something useful: an aircraft factory, say. You land your squad, fight the local defenders, and steal the aircraft. That's your choice."

And, in an example of things coming full circle, it's clear in Phoenix Point's slick animation and interface that Firaxis' XCOM has inspired Gollop in some ways. "I love those games," he says. "I really like the sense of drama they manage to get from a turn-based game. There's some impressive 3D graphics and camera work in there. A nice interface too, which works smoothly with a mouse and keyboard or a controller. XCOM 2 in particular had great character customisation. They obviously streamlined a few things compared to the old X-COM games, most of which I think were good decisions. And they managed to reach a really wide audience with those games, too."

It's great to see Gollop return to the genre that made his name. Phoenix Point is set for release in June, and it'll be interesting to see how it stacks up against Firaxis' take on XCOM. The added layer of grand strategy — warring factions, diplomacy, espionage, and so on — will hopefully sit comfortably alongside the more granular, turn-based decision-making of a battle. With such a rich, storied history of making strategy games, from the ZX Spectrum to the present day, I reckon Gollop can pull it off. PC



THE HISTORY of the STRATEGY GAME

PART II

By FRASER BROWN

Some of strategy gaming's most influential titles were developed for consoles, but by 2000 the genre had been synonymous with PC for a decade. The launch of the PlayStation 2 saw more and more people drift away from their PCs, prompting Microsoft to make the Xbox, which appeared the following year. It might have looked like a PC, but when it came to traditional strategy games, it was just as hostile an environment as any other console. The audience was shrinking, publishers were becoming increasingly risk-averse, and players were coalescing around stalwart franchises.

Out of this came oddities, hybrids, spin-offs, and more experiments with 3D maps and cameras, like Massive Entertainment's real-time tactics game, Ground Control. Similar to Relic's Homeworld, it gave you free rein of the camera, letting you zoom out for an overview of the battle — though not quite as far, given the smaller scale — and then all the way up to your beefy sci-fi units, watching them from ground level as they bombarded enemy fortifications or stormed bases. It looked great, and it boasted plenty of other noteworthy features, like 3D terrain that could modify accuracy, foliage that could hide troops, and customisable units.

At the same time, Shiny Entertainment introduced the world to Sacrifice. In another reality, Sacrifice is probably hailed as an important and influential RTS, but for some reason we're stuck in the one where it's more of a brilliant, overlooked curio. With a library that included Earthworm Jim and MDK, Shiny's games were typically strange and inventive, but the studio had never worked on anything close to a strategy game. That might have been an advantage, as Sacrifice ripped apart RTS conventions.

Sacrifice looked nothing like an RTS, borrowing its perspective from third-person action games and keeping the screen devoid of clutter. Players directly controlled just one character, a wizard, who could cast

RIGHT: There's nothing cowardly about hiding behind a big hill.

BELOW: Sacrifice's creature designs were fever dreams brought to life.

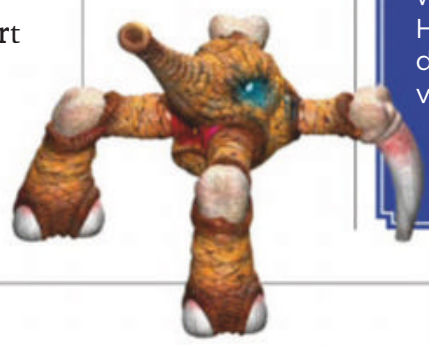
Westwood was gone, but Command & Conquer was still kicking about.

ESSENTIALLY, YOU WERE A DUNGEON MASTER, SENDING HEROES OUT ON ADVENTURES

apocalyptic spells and summon all sorts of colorful, magical units. The summoned creatures followed the wizard around, and could be given orders or put into formations. Instead of fussing with resources, buildings, and large armies, all of your concerns were right there in front of you: the wizard and their crew of weird minions. And it looked incredible for the time. It was a surreal, broken dreamscape that looked like it leaked out of the brain of Salvador Dalí or Hieronymus Bosch. The unit design was just as strange, featuring a large menagerie of outlandish beasties that could be thrown into battle.

These new strategy games were posing interesting questions about what ingredients the genre really needed to succeed, and what could be thrown away or reconsidered. Majesty: The Fantasy Kingdom Sim, for instance, asked if we really needed direct control at all. Instead of commanding units, players had to tempt heroes to set up shop in their town by providing the appropriate facilities, and then encourage them to go and solve nearby problems by creating quests and rewards. Essentially, you were a Dungeon Master, sending heroes out on adventures to explore a new part of the world or murder some pesky monsters.

Established franchises were getting smaller, but still notable, shake-ups. Age of Mythology applied the Age of Empires formula to ancient myths and legends, throwing monsters, magic, gods, and heroes into the



GET CARDED

Like the wargames of the ’70s and ’80s, collectible card games have increasingly been going digital. Some, like the wildly popular Magic: The Gathering, started out as physical games before digital spin-offs cropped up, while others, like Hearthstone, were developed as videogames from the ground up. While the settings, rules and mechanics often differ a great deal between them, these strategy-adjacent games task players with creating decks of armies, heroes, buildings, spells, or just broad concepts. Hybrids have been appearing too, like Card Hunter, which mixed tabletop RPGs with CCGs and tactical combat, and Valve’s upcoming Artifact, inspired by Dota 2.

ABOVE: Frost Wyrms just want to help everyone cool down. Honestly!

TIME COMMANDERS

TV shows featuring videogames are usually rubbish, but not Time Commanders. The BBC show gave teams of four a historical army to lead and an enemy to fight, with captains barking out orders and the rest of the team relaying them to staff from the show. There were planning sessions, teams poring over maps, and tons of heated discussions, but the thing that brought the battles to life was our pal Rome: Total War. Products can't be promoted on the BBC, so the game wasn't mentioned, but it was the show's linchpin. All of the Time Commanders' orders were acted out on a modified version of the game, and it looked incredible. Only two series were produced, but it was briefly resurrected in 2016.

mix. Command & Conquer: Generals, the first post-Westwood game in the series, switched the setting to another near-future crisis, ditched harvesters, and went 3D. Civilization had also returned home to its creator after some drama, litigation, and Activision's Civilization: Call to Power. Civilization III would prove to be a divisive instalment, but it also introduced the culture system, changing the ways civilizations could expand and opening up new paths to victory that didn't involve conquest.

In 2002, Blizzard returned to Azeroth with a story of unlikely ententes, demonic armies, and superpowered heroes. Warcraft III: Reign of Chaos was a fantasy epic not just driven by armies and resource-gathering, but by sympathetic, multifaceted characters whose stories continue to develop today. The plot actually started out as an adventure game, Warcraft Adventures: Lord of the Clans. With it, Blizzard wanted to chart the life of Thrall, the eventual leader of one of Warcraft's factions, the Horde. It was ultimately shelved, but the story of Thrall got a second life in Reign of Chaos.

The importance of these heroes went beyond the narrative. When Warcraft III was first announced in 1999, it was a strategy RPG, reminiscent of King's Bounty or Heroes of Might and Magic. A lot of the RPG elements ended up on the cutting room floor, but the role of heroes persevered. Heroes were powerful units who grew as they gained experience, developing handy new abilities. They could equip magical gear, too, and even do a spot of shopping to give them an edge. Sure, they were surrounded by small armies and fighting in a world-shaking war, but these were adventuring RPG heroes.

It was still undoubtedly an RTS, but amid all the base-building and troop management were nods to

FROZEN THRONE MARKED THE END OF WARCRAFT, AT LEAST AS A STRATEGY FRANCHISE

RPG design, such as quests and NPC enemies that were hostile to every faction. Because they'd persisted through all the other changes, they weren't novelties; they were built into the game's foundations. Thanks to these innovations, as well as Blizzard's brilliant balancing and clever mission design, Warcraft III and its expansion, the Frozen Throne, became seminal strategy games.

Frozen Throne marked the end of Warcraft, at least as a strategy franchise. The critical and commercial success of Warcraft III, instead of paving way for yet more RTS games, set the scene for its MMO successor, World of Warcraft. Its strategy legacy is just as important, however, with Warcraft III at least being partly responsible for the birth of multiplayer online battle arenas, or MOBAs.

Defense of the Ancients was a Warcraft III mod that gave players direct control of their hero, and nothing else. Armies and bases were still integral, but there was no construction, nor could these armies be commanded; instead they automatically marched down lanes, attacking enemy towers or any other units they came across, until they reached the opposing base. Defense of the Ancients was based on a StarCraft custom map, Aeon of Strife, but used Warcraft III's RPG hero systems to create the blueprint for the vast majority of MOBAs that would follow in its wake.

Though it would take several years for the popularity of Defense of the Ancients to inspire commercial imitators and spiritual successors, plenty of variants were developed by other Warcraft III modders. Kyle 'Eul' Sommer developed the original mod, but when Sommer ceased updating his version, new mods filled the vacuum. DotA: Allstars attempted to capture the best of this burgeoning genre of mods, throwing an assortment of heroes from across multiple variants into one map. Allstars grew, and it eventually passed into the hands of eventual League of Legends designer, Steve 'Guinsoo' Feak.

Feak developed a lot of new features, heroes and items, but perhaps the most important thing to come out of Allstars was its competitive community. Tournaments had started kicking off, the forum was a constant hive of activity, and the mod was always being tweaked and balanced by a growing team and a community quick to give feedback. Allstars' popularity was unprecedented, and it would sit at the top of the pile until 2009, when League of Legends launched. Valve's standalone sequel, designed by another DotA modder, generally known just as IceFrog, followed

BELOW: Don't let the teeth fool you—Thrall's a big softy on the inside.

RISE OF NATIONS

When Civilization codesigner Bruce Shelley embarked on Age of Empires, it was going to be a cross between Civ and RTS games like Warcraft and Command & Conquer. Those lofty ambitions were never quite matched by Age of Empires, but Rise of Nations got a lot closer. Also designed by a Civ alumnus, this time Brian Reynolds, it made all of human history an RTS playground. Reynolds threw lots of concepts more common in turn-based games into the mix, including territory, attrition, and overseeing multiple settlements, but it was all manageable, even with the real-time pace. It looked poised to usher in an exciting new era of RTS games, but despite being brilliant, it never did.

2, the studio set about bringing the 41st millennium to life. Warhammer 40,000: Dawn of War flung Space Marines, Eldar, Orks, and Chaos at one another in the battlefields of Tartarus. The name should have been a giveaway.

Relic maintained a lot of the concepts from Games Workshop's enduring tabletop game, bending them around a fast-paced RTS. Your typical RTS resources, for instance, didn't feature in Warhammer 40,000; sending out gathering units or fiddling with your economy wasn't really in keeping with the hyper-aggressive setting. Dawn of War used resources more to push players into conflict. Requisition points were

ABOVE: The only thing that could be prettier than Homeworld: Homeworld 2.

WORLD OF WAAAGH

There's always a new Warhammer game knocking around, whether it's inspired by the fantasy universe or its 40K sibling, and not surprisingly, quite a few of them have been strategy games. The licence hasn't always been used well, but there is variety. Even just in the last few years we've seen claustrophobic turn-based tactics like Space Hulk, massive wargames like Warhammer 40,0000: Armageddon, grand strategy in the form of Total War: Warhammer, and even a 4X game, Warhammer 40,000: Gladius, which reimagined the genre without diplomacy. If you've got an idea for a new Warhammer game, give Games Workshop a shout; it will probably let you take a crack at it.

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required to plonk down buildings and recruit squads, but instead of being gathered, these were generated by capturing and holding strategic points.

The small number of strategic points ensured there was an endless supply of lively battles. Instead of hunkering down and protecting your base, you had to strike out, ordering your squads to travel all over the map, not just to find strategic locations, but to reinforce them, protecting them from enemy assaults. A morale and cover system made its way over from the tabletop game, as well. It was a tactical layer that necessitated a bit more thinking and a little less screaming, "Blood for the Blood God!"

With Company of Heroes, Relic swapped the grim battlefields of Tartarus for Normandy. The things that had set Dawn of War apart, Relic ran with. And it ran far. Morale and cover were refined to the point where playing an RTS without these systems suddenly seemed crazy. Every squad was this squishy, vulnerable group of soldiers which could be wiped out at a moment's notice, or broken and forced to flee for their lives. But with the right commander, they could do wonderful things.

A tank might be able to make short work of some infantry, but hide footsoldiers behind a wall, wait for that tank to roll by, and you'd get a shot at its weak points. Or the tank could just smash the wall and kill all your lads. The Havok physics engine fuelled Company of Heroes' destructible maps, so units couldn't get too comfy. Luckily, cover was always clearly marked, not just showing you where your units could seek protection, but exactly how protected they would be. There was also an unusual delineation between troops and weapons. A weak squad of riflemen, for instance, could capture an anti-tank gun, letting them lock down a road all on their own. Infantry could pick up abandoned weapons and commandeer them from enemies, making them extremely versatile.

ABOVE: Relic left spaceships and Space Marines for World War 2.

Company of Heroes often seemed more like a squad-level wargame than an RTS, evoking the likes of Close Combat rather than Command & Conquer. There were even supply lines, though they were heavily abstracted. Like Dawn of War, players fought over capture points, but each point was connected to the rest, simulating a supply line. Taking out just one part in the chain could destroy another player's economy and force another confrontation. It wasn't like taking out an enemy

Company of Heroes' fights were full of smoke, fire, and crumbling buildings.

COMPANY OF HEROES OFTEN SEEMED MORE LIKE A SQUAD-LEVEL WARGAME THAN AN RTS

harvester — the only way they could fix it was by taking back that location, even if it seemed hopeless. There was real drama behind the battles.

Company of Heroes heavily drew from Band of Brothers, 2001's HBO miniseries, and was thick with the show's atmosphere. The ruined countryside and villages of Normandy were unlike any other battlefields. Each map was elaborate, dynamic, and, of course, incredibly dangerous, full of places for snipers and mortar teams to hide. It was emotionally resonant, too. The pockmarked roads, the destroyed European towns, the terrified men trying to escape machine gun fire — even when it was explosive and exciting, a melancholy cloud loomed over everything.

It wasn't enough to slow, let alone stop, the decline of the RTS. There were still notable titles appearing, but more often these were sequels and spiritual successors. A year after Company of Heroes launched, we saw Total Annihilation resurrected in the form of

ABOVE: World in Conflict lit a fire underneath the Cold War.

LEFT: StarCraft II sold like no other RTS before it, or since.

THE SUPREMES

Total Annihilation's unique approach to RTS games in the 90s didn't lead to many imitators, which is possibly why Chris Taylor decided to make a spiritual successor to his own game. Supreme Commander took Total Annihilation's foundation, and then made it bigger. Huge. It was no wonder that it was an early adopter of dual-screen support. Recent years have seen a greater yearning for a Total Annihilation-style game. Planetary Annihilation, with its conflicts taking place across solar systems, upped the scale, but lost something by trying to appeal to the esports crowd. 2016's Ashes of the Singularity was the latest in the line, though hopefully not the last.

Supreme Commander, designed by original creator Chris Taylor, while Massive Entertainment followed up Ground Control 2 with the superb World in Conflict. RTS games were still alive, but only just. Today, the most popular RTS is still StarCraft II, which launched in 2010. Its excellent expansions and huge multiplayer support are responsible for its longevity, and it helps that it features some of Blizzard's best mission design, but it's still very familiar.

Elsewhere in the strategy genre, people could satisfy some of their turn-based cravings with Total War, but empire-building wasn't quite what it used to be. Wargames had become a niche satisfied by a few specialist publishers. In the 4X realm the long-awaited sequel to Master of Orion II launched to disappointed grumbling in 2003, and aside from a few exceptions like Galactic Civilization, new titles became increasingly hard to find.

There were bright spots amid the gloom. In 2005, Civilization IV saw designer Soren Johnson re-evaluate everything, right down to the series' foundations. Along with being the first 3D Civilization game, it was also the first to be built from the ground up as a multiplayer game. It introduced upgradable units, a religion system, and more accessible modding, giving it a second life as a platform for not just new scenarios, but entirely new games. Civilization IV marked the beginning of a new generation of Civilization games, with its successors featuring even bolder redesigns.

Carving out an empire didn't have to take place turn-by-turn, of course. Sins of a Solar Empire made

ABOVE: Map porn doesn't come better than a Paradox game.

a great case for 4X games to dip their toes into real-time action, mashing up empire management with gorgeous RTS space battles. You could quickly dash between commanding a fleet of ships, laying siege to an outpost, and governing worlds, seamlessly. And where other 4X games could be slow-burning, Sins of a Solar Empire had the pace and aggression of an RTS. Alliances could be forged, but conquest was always on everyone's minds.

Throughout the '00s, Paradox Development Studio had been creating some of the most complex and dense grand strategy games around. All of them played out in real time, but with speed controls and liberal use of the pause button. Years could fly by in-game, but equally you could spend hours not moving time forward at all, obsessing over trade deals and assassination plots with your nose buried deep in the menus. The Europa Universalis series, set in the late Middle Ages, is the flagship of the bunch, giving players control over the fate of a historical nation across centuries. There's the economy to juggle, along with wars, colonial ambitions, religious crises, civil wars, and political relationships with countless other nations all across the world.

The success of the first Europa Universalis spurred Paradox on to create more grand strategy romps, including Hearts of Iron, set during World War 2, and Victoria, which honed in on the industrial revolution and the dramatic political and social changes that the era brought with it. All of them were liberating simulations that let players chart their own course through history, creating bizarre alternate realities that only made sense if you'd read the after action report. They were also incredibly rough around the edges, buggy and a nightmare for newcomers to get their teeth into.

Sporting a new engine and an extra layer of polish, Crusader Kings II was a turning point for Paradox. Though its predecessor had been tepidly received in 2004, Crusader Kings II found a much larger audience, who then spread bizarre stories and anecdotes of the histories of their characters and dynasties. Instead of running a nation, players controlled the leader of a medieval family; you might be a powerful empress or a count with no vassals and no ducats. Through political marriages, wars, and Choose Your Own Adventure-style events, you could end up losing everything, including your head. Or you could kill your spouse, marry your horse, leave everything to your children, and flee to another continent to start a new, more enlightened kingdom. Crusader Kings II could get weird, especially when you throw in expansions that include Aztec invasions of Europe and Satanic cults.

Paradox's peculiar grand strategy RPG arrived during a more hopeful time for strategy games. The first decade of the 21st century had not, when all was said and done, been particularly kind to the genre, but things seemed to be slowly changing. More new 4X games were appearing, like the extremely complex Distant Worlds and the Master of Magic-inspired Warlock: Master of the Arcane. After overextending with the massive and ungainly Empire: Total War, Creative Assembly returned with a focused and refined standalone expansion, which it then followed up with arguably the best game in the historical series, Total War: Shogun 2. Then, in 2012, aliens invaded Earth again.

Developed by Firaxis, XCOM rebooted the 90s tactical titan, UFO: Enemy Unknown. It had been a whopping 15 years since X-COM: Apocalypse, the last successful X-COM, with the proceeding years only seeing a mixed bag of spin-offs, culminating in 2001's completely forgettable third-person shooter, X-COM: Enforcer. Though it was designed without series creator Julian Gollop, XCOM nonetheless felt like a return to form. More than just a modern update to the original game, it was a slick reimagining. The large, loose teams were switched out for specialised

COMPANY OF HEROES OFTEN SEEMED MORE LIKE A SQUAD-LEVEL WARGAME THAN AN RTS

squads full of soldiers who could be obsessively customised, while randomly generated maps were replaced with hand-crafted environments. There was streamlining, but there was also plenty of expansion.

XCOM didn't just appeal to the diehards who had been keeping the flame alive for over a decade, or even just the general strategy crowd; its accessibility and flashy presentation opened the doors wider, but not at the expense of the challenge. XCOM proved to be a demanding game at times, forcing players to make hard choices and sacrifices, but it usually stopped short of being overwhelming — unless you were playing in Ironman mode. That forced commanders to live with their mistakes and decisions, including the loss of a soldier or even

BOTTOM: XCOM: Enemy Unknown reignited the fight against aliens and RNG.

VENI, VIDI, VICI

Command & Conquer defined a generation of RTS games, but after Westwood was closed by EA in 2003, the series started to lose its shine. EA Los Angeles started strong with the rather different Command & Conquer: Generals, but quickly returned to the Tiberium and Red Alert series. The sequels were well received, but they played it safe at a time when other RTS titles, ones without Command & Conquer's legacy, were innovating and experimenting. 2010's Tiberian Twilight veered in the other direction, putting all of its eggs in the multiplayer basket. It proved to be a bit of a misstep, and since then the series has been relegated to browser and mobile games.

CONSOLE CLASSICS

Strategy games weren't entirely excommunicated from consoles. Tactical RPGs thrived, from Final Fantasy Tactics to Valkyria Chronicles. The latter, in particular, took advantage of console and handheld control schemes, so there was no sense that you'd be better off with a mouse and keyboard. There was an abundance of them on handheld consoles, and being able to play large, complex strategy games on the bus or on the loo was something of a revelation. They've been making their way onto PC recently, too. Valkyria Chronicles appeared in 2014, followed by Valkyria Chronicles 4 in September, along with several entries in the devilish Disgaea series.

ABOVE: That security guard probably isn't getting a raise this year.

Below: Every Invisible Inc. mission could cost your agents their lives.

entire squads, by only giving you a single save file that got overwritten with every turn.

A lack of publisher confidence had been holding strategy games back for years, but here was XCOM, a niche tactics game, getting lots of attention and launching on everything from PC to mobile. XCOM was published by 2K Games, which had acquired Firaxis in 2005, but publishers were becoming increasingly optional thanks to crowdsourcing, early access platforms, and more accessible game development tools. Suddenly it was impossible to keep track of all the new games popping into existence.

Invisible Inc., Klei Entertainment's espionage-themed tactics game, appeared on Steam Early Access in 2014. It was endlessly inventive; simultaneously an exceptional stealth game and a landmark tactics affair. There was something liberating about its pure-stealth focus. There were no drawn-out gunfights after you'd been spotted. You either used one of your agent's tricks to get out of the way, or you were done for. Every mission was a randomly generated puzzle that could blow up in unpredictable ways, leading to agents needing rescue or even a playthrough that ended in failure. But it was also a game that begged to be played over and over again.

It wasn't just independent developers taking advantage of new models like early access. Endless Legend launched on the platform in the same year as Invisible Inc., and quickly set about rewriting the 4X genre. Amplitude's previous game, Endless Space, had been a competent, Master of Orion-style 4X with an unusual card-based combat system, but it was as sterile as the cold vacuum of space. That wasn't a problem Endless Legend had. No 4X game since Alpha Centauri had featured such a fascinating, rich set of factions,

Amplitude's Endless Legend was a lesson in how to design compelling factions.

WHILE A LOT OF SERIES HAVE FALLEN BY THE WAYSIDE, PLENTY HAVE SURVIVED

and here their differences went far beyond ideology or well-written flavor text. Take the Necrophage — they're an endlessly hungry species of plague-spreading insects, which means they will never make friends with anyone. The Cult, meanwhile, is manipulative and influential, but can't build cities. There are mages, space marines, and even a group of dragons who just want everyone to get along, and each represents a distinct way of playing the game.

Evolutionary dead ends were springing back to life, and old franchises were making comebacks. It was strange to think that strategy had been looking sickly only a handful of years before. Darkest Dungeon, Homeworld: Deserts of Kharak, Eugen's Wargame series, Offworld Trading Company, Ashes of the Singularity, Northgard, BattleTech, Into The Breach — the list is vast, and features every kind of strategy game imaginable. And while a lot of series have fallen by the wayside, plenty have survived. Civilization is probably immortal by this point, StarCraft continues to be massively popular, and Total War now counts the Warhammer fantasy universe among its battlefields. Even tabletop games, where our trip through the history of strategy began, have seen a resurgence.

Strategy games are as vital and creative as they've ever been. ■

A MOD FOR EVERYTHING

Mods and map editors have had an incalculable impact on strategy games. Defense of the Ancients spawned MOBAs, of course, but so many great ideas and, indeed, developers have sprouted from mods, while the communities that build up around them can sustain a game long after the patches and official content have ceased. Total conversion mods like A Game of Thrones for Crusader Kings II and The Third Age for Medieval II: Total War are considerably better than most official licensed games, especially now that they've seen years of updates, while others answer important what-ifs: Like what if Fallout was a grand strategy game? Yeah, there's a mod for that.

Games 275

YOUR GUIDE TO PC GAMES

Closure issues

I have a problem.

Hello, my name is David Hollingworth, and I have a problem. I have been playing games for over 35 years now, but recently... Dammit, I can't finish a damn one!

I still love games — I couldn't do this job if I didn't. I love the people who make them, I love the stories they tell, and I love being a part of opening up that process to the people who play them. But heck — the older I get, the harder it is to stick with them.

So why? Well, it's all about time, really. Both a growing lack of it as life generally trends towards a more complex state (until it starts trending back to child-like simplicity, and then, uh, kinda stops), and the growing amount of it that it takes to finish a big AAA game these days. Maybe I should chat to Meghann about some nice, perfectly formed yet short indie games to play in my lunchbreak?

David Hollingworth
Editor

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POWERED BY
REPUBLIC OF GAMERS

1

SCORING SYSTEM | PCPP scores its games on a 1 to 10 scale. The higher, the better – though 10 is by no means a "perfect" game. We're not convinced such a thing exists, so consider a 10 a masterpiece of PC gaming, despite its inevitable flaws. A 5 is a decidedly average game; one that doesn't excel in any particular area, without being an affront to our senses – the ultimate in mediocrity. Below this, you'll start to find the games our reviewers suffered an aneurysm getting through; above it, the titles truly worth your time and money. And remember: a score is only a vague indication of quality. Always read the full review for the definitive opinion!

10

Resident Evil 2

A remake of the PlayStation classic, is a masterclass in making an old game feel fresh again.

DEVELOPER CAPCOM • **PUBLISHER** IN-HOUSE
www.residentevil2.com

One of the most remarkable things about this Resident Evil 2 remake is that it makes zombies — the slow, shambling, groaning kind — exciting again. The undead in this game are incredible, horrible things: shuffling lumps of bloody meat who batter down doors, tumble through broken windows, and lunge hungrily from the shadows. They're physical, clumsy, and an absolute joy to kill — if you have the ammo to spare.

Shoot a leg off and they keep coming, dragging themselves along the floor, reaching at you with pale, clawing hands. Turn a corner, and as the beam of your flashlight catches their glassy white eyes they screech and trudge towards you, arms outstretched, jaws slung with glistening blood. They don't sprint or explode or sprout thrashing parasites like they do in newer Resident Evil games: They just moan and lurch and grab, and there's something enjoyably back-to-basics about that: a feeling that echoes through every dark, claustrophobic hallway of this confident remake.

After the subversive Resident Evil 7, with its grimy Southern Gothic aesthetic and intimate first-person horror, Resident Evil 2 is a return to a more familiar style of game. It's a remake, but it's never a slave to the source material, adding or cleverly remixing enough elements to make it feel brand new. You can still play as two characters — Leon S. Kennedy and Claire Redfield — and a few fan favorite bosses and locations have been recreated. But even moments of fan service are given some kind of twist or fresh angle, which is, honestly, not what I expected from this remake at all.

The grand, imposing Raccoon City Police Department was always a great setting, but the shift to three dimensions makes it magnificent. While the original game relied on fixed camera angles and the distant moan of unseen zombies to build fear, the remake uses light, shadow and layout to get under your skin. Some parts of the station have been plunged into darkness, forcing you to pick through the gloom with a flashlight. The building itself is a labyrinth of blind corners, shadowy recesses and warren-like corridors, creating a constant feeling of apprehension.

The zombies have come a long way since 1998.

WHY SHOULD I CARE?

+ You don't believe there are enough zombie games.

+ You love repetition.

+ You love repetition.

The station is essentially a giant box of puzzles, and an absence of objective markers or other such hand-holding means you have to draft a mental map of the building as you make your way through it. At first most of the building is locked up tight, or obstacles such as the burning wreck of a crashed helicopter block the way forward. But as you explore you find items that let you delve deeper, and slowly but surely the maze of halls, offices, atriums and stairwells starts to feel familiar. I also like how dead zombies stay put, even after reloading a save, as I'd often use their corpses as a kind of macabre breadcrumb trail.

But navigating the station and deciphering its riddles and puzzles is only half the battle. The zombies, as much fun as they are to fight, can take a hell of a beating. Their health seems to be randomized, meaning that you can empty ten bullets into one and it'll keep crawling after you, while another will be put down permanently by just a few shots. This makes them unpredictable and tenacious, as zombies should be. But it also teaches you a hard lesson that every bullet in this remake is precious.

HUNTED DOWN

Then there's the Tyrant, a hulking great mutant in a trench coat for whom gunfire is little more than a minor inconvenience. At certain points in the game this merciless, invincible killing machine will hunt you around the station with grim persistence. You can track his movements by listening to the heavy thud

FLASHBACK THE POLICE STATION, THEN AND NOW

JANUARY 21, 1998
The prerendered 640x480 backgrounds of the original game aren't hideous, but the original RPD main hall lacks a little atmosphere.

JANUARY 25, 2019
The new version, on the other hand, benefits from modern lighting (and being 3D, of course), and is much scarier as a result.

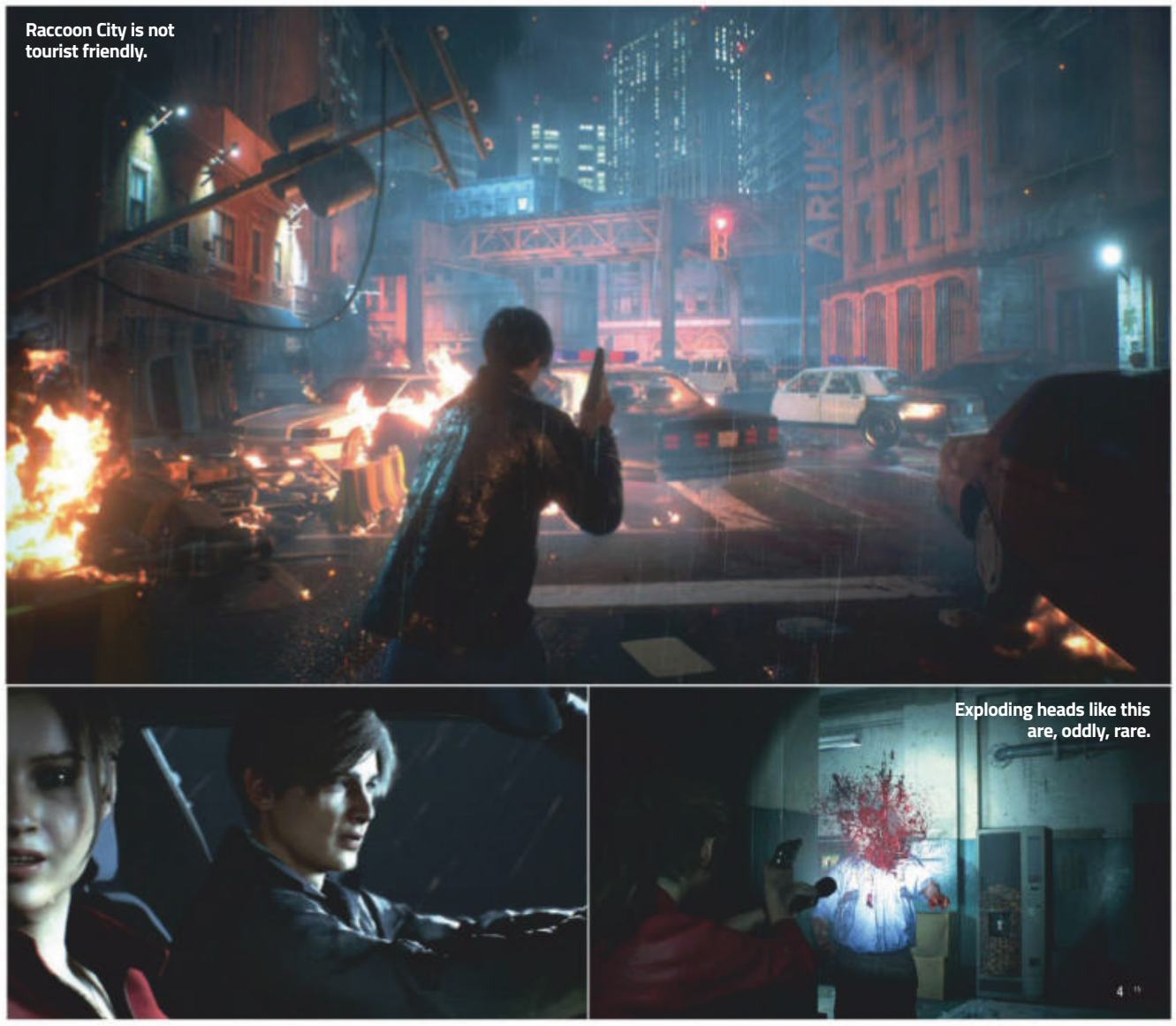
of his footsteps, but other than blinding him with a flashbang, evasion is your only real option. He's also attracted to gunfire, which adds further weight to decisions involving fighting regular zombies. Do you waste ammunition and risk alerting the Tyrant?

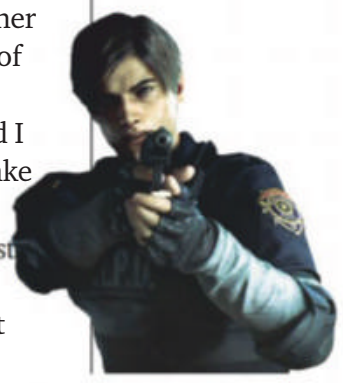
The way he walks slowly towards you, unflinching and emotionless, is genuinely unsettling—especially when he suddenly appears at the end of a long corridor. And he's always lurking near items you need to progress, which is brilliantly cruel. But I would have liked more ways to interact with the Tyrant, because eventually these run-ins start to feel rather one-note, and the fear can mutate into frustration. Even the ability to throw something to distract him would have made these sections a bit more interesting, but as it stands the concept feels disappointingly underdeveloped.

Similar to Resident Evil 4, the difficulty of the game adapts as you play. How it actually works is obscured, but whatever's going on behind the scenes, the balancing is quite masterful. For the entire nine hours it took me to finish my first run as Leon, I felt constantly on the verge of catastrophic failure.

The good news is that if you sacrifice ammo to clear out an area, it'll stay clear. More zombies can spill through open windows, but you can block these up with wooden boards. This gives you some breathing room, especially when you're being chased by the Tyrant. The last thing you need is zombies clawing at you when you're trying to run to safety. Counter-weapons can also tip the balance. If you have a grenade or a combat knife in your inventory and something grabs you while you're low on health, you'll avoid death: Stabbing them with the blade or shoving a grenade in their mouth. So the game isn't completely relentless in its attempts to sabotage you, but for every inch it gives you, it takes one right back.

It's never really that scary, though. Unnerving, tense, and sometimes overwhelmingly stressful, sure, but there's nothing particularly psychological about it. But that was always Resident Evil's thing: Zombie dogs crashing through windows rather than the psychosexual mind-beasts of Silent Hill. Still, Resident Evil 7 had some effectively eerie moments, and I would have liked some of that to make its way into this remake. If you can't deal with the stress, there is an 'assist' difficulty option that adds generous auto-aim and makes a small amount of health regenerate automatically.





ABOVE: The two playable characters, Claire and Leon.

But, honestly, the game just isn't very exciting when your item box is heaving with an abundance of spare shotgun shells and green herbs.

SECOND WIND

When you finish your first playthrough, you've really only seen half of what the game has to offer. The second run uses the same locations and has many of the same story beats, but the puzzles are different, enemy types and locations are mixed up, and you take a different route through each of the game's three major locations. What I love about this so-called 'B' scenario is how the game uses your knowledge of the setting against you. Walking into the RPD main hall as Claire, a protected haven for Leon, and seeing zombies in there was a fun subversion. It's just a shame the intensity of the Tyrant is amped up to such a preposterous degree. He's constantly looming over your shoulder, which I ultimately found a bit annoying.

As a longtime fan of the original Resident Evil 2, I enjoyed the remake's many self-aware attempts to clarify some of the more abstract stuff in the game—such as why a sewer system is powered by plugs shaped like chess pieces, or why a police station would theme its keys and locks around playing card suits. There are other cute references to the old games to find, but they're pretty subtle and don't feel forced. This could have easily been a game targeted squarely at fans, but if this was your first Resident Evil you would get your head around everything in minutes—another example of how refreshingly simple the remake is. The story is really no more complicated than: Zombies everywhere, get to safety.

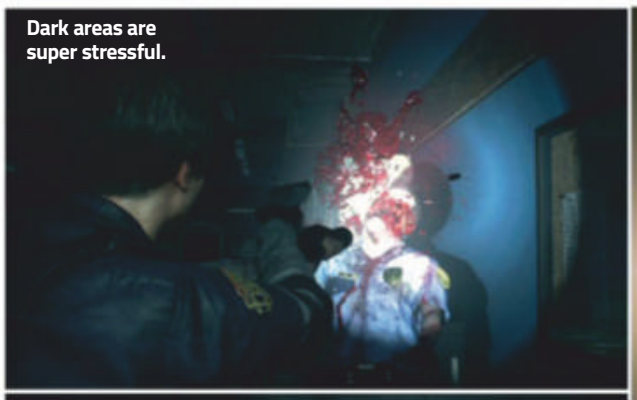
Some of the voice acting and writing are pretty bad, and not 'fun bad' like in the old PlayStation games: Just regular bad. The second act, which takes place in a dingy sewer, is a little slow. And I was glad when the section where you play as Ada Wong, solving hacking puzzles while the Tyrant stalks you, was over. But otherwise, this is pretty much the ultimate refinement of the classic Resi formula—but with the added joy of RE4's dynamic over-the-shoulder combat. The result is a game that is among the best in the series, and a thrilling survival horror experience in its own right. It's not as surprising as RE7, but as an evolution, and a celebration, of classic Resident Evil, you couldn't ask for much more.

ANDY KELLY PC

VERDICT:

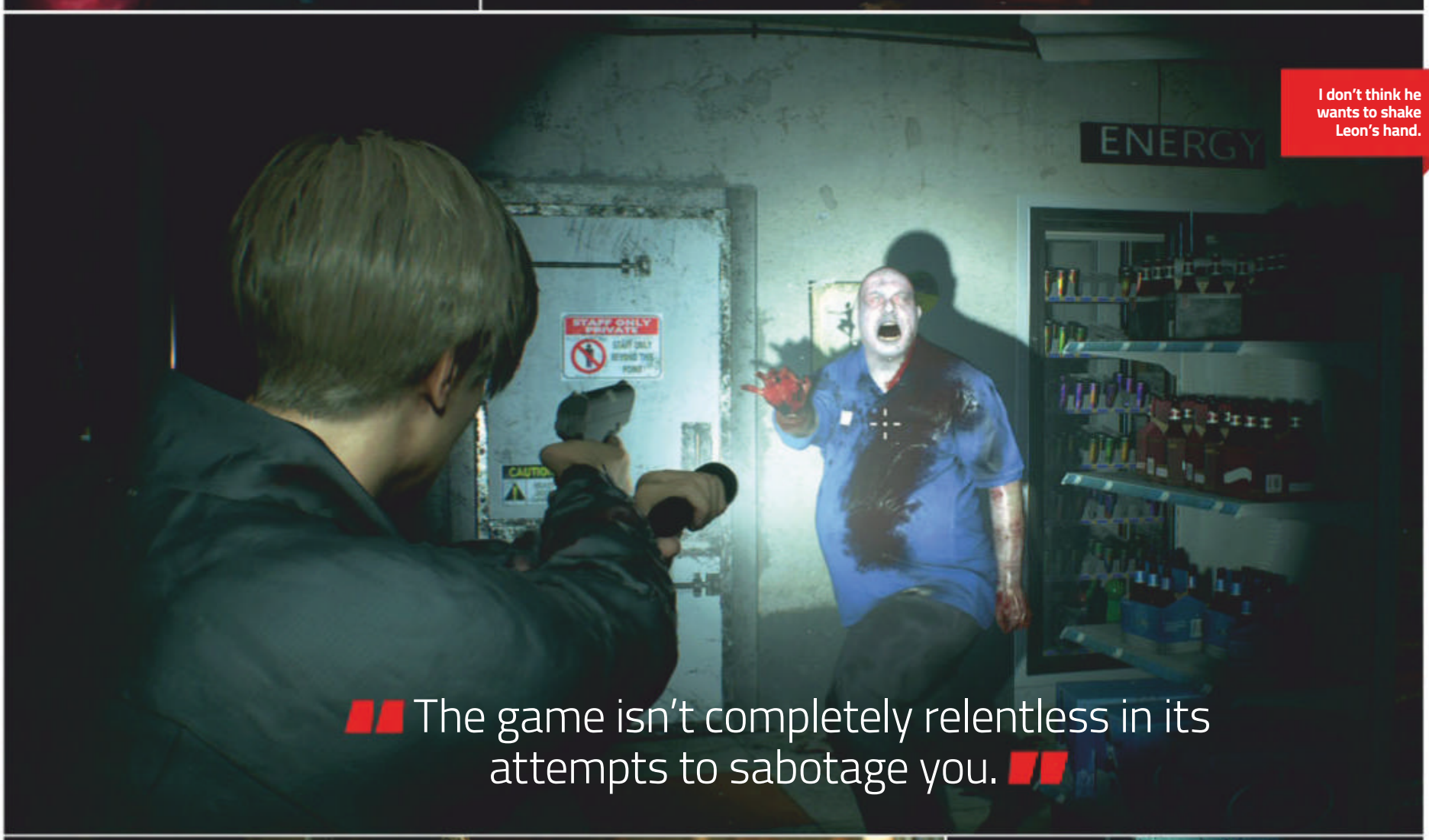
A tense, challenging and beautiful remake of a classic, with enough new ideas to make it feel excitingly new.

9



Dark areas are super stressful.

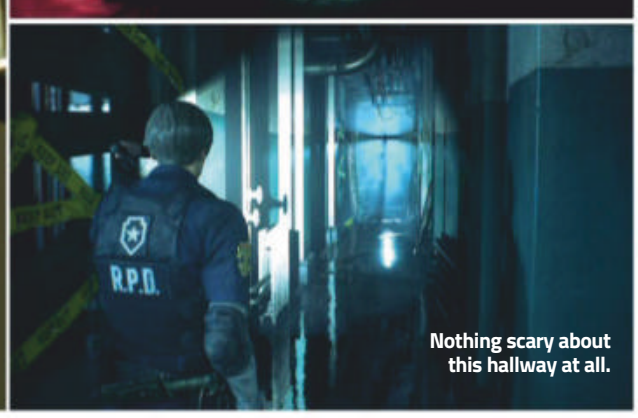
The character models are extremely good.



I don't think he wants to shake Leon's hand.

"The game isn't completely relentless in its attempts to sabotage you."

One of a very few survivors you'll meet.



Nothing scary about this hallway at all.

Kenshi

Become a ruler, a nomad, or a frustrated nobody.

DEVELOPER LO-FI GAMES • **PUBLISHER** IN-HOUSE
www.lofigames.com

In my time with Kenshi, I've crossed swamps so vast that I haven't dared return. I've been beaten shitless by a pack of goats that were intended to feed my rabble of listless nomads. I've been a shopkeeper and a thief, a lone wanderer and a slave, and I've been an entire community of people working together to—one day—erect our own city in the wasteland. One day.

None of these events were part of questlines. There's no such regimentation in Kenshi, no tangible sense of scripted behavior, just a web of vicious systems so numerous that they sometimes tangle and fumble and descend into absurdity.

Upon creating your squad of up to six starting characters, you're dumped into a dauntingly large post-apocalyptic world. All of your skills start at or around zero, and you work on them simply by doing. You'll probably spend your first several hours as a lowly scavenger — sticking to the shadows, leveling up your stealth, and scurrying in after skirmishes between the various factions and fauna to loot the dead.

Beyond that? Perhaps you search the wilderness for artifacts or lore titbits, hunt down bounties for the myriad factions, join up with anti-slavers, or set up shop on a trade route.

Through bar-crawling and chance encounters with escaped slaves and other vagabonds, you can recruit new people, who you then take control of just like your original characters. You can have several squads in different parts of the world if you wish, or train new members as farmers and laborers so that you can build a self-sustaining settlement.

At this point, Kenshi becomes a surprisingly effective management game as you research technologies, construct buildings, and assign people long lists of automated tasks like mining, farming, and construction. Settlements present their own dangers: Out in the wilderness you'll face bandit and animal attacks, while settling near cities may subject you to taxation and other regional rules.

There are a few missions you can pick up by talking to people, but the best stories are those that emerge out of Kenshi's systems. For instance, in the early game, my first companion and I were beset by slavers, who took one of us captive while the other managed to escape. I licked my wounds, gathered my wits, and took it upon myself to rescue my friend.

After some hours of scavenging, I saved up enough money to hire a mercenary band. We raided the camp and rescued my comrade, but it didn't end there, as his shaved-head-and-shackles look meant that authorities would identify him as an escapee and attempt to recapture him. So began a survival experience in the wilderness while his bounty expired.

Kenshi's mechanics and UIs have an arcane MMO feel, which can get cumbersome. Combat is automated, though you can set defensive postures, order ranged attacks, and play around with formations. Movement, meanwhile, is mouse-based, with the WASD keys controlling the camera. While the combat is functional, given how many people you can end up controlling, things can get fiddly when you're managing inventories, transferring items between ten or more people, and trying to get your settlement running as efficiently as possible.

After around 30 hours, I still feel like I've so much to uncover. Kenshi is huge, amoral, and opaque enough that I'll be deciphering it for a very long time. PC

ROBERT ZAK

My mercs ponder the irony of a farmer getting eaten by herbivorous beasts.

SYSTEM OVERLOAD THREE STORIES FROM THE SYSTEMIC MIND OF KENSHI

A WARM WELCOME

I got into a bar fight by shitmouthing a local. Town guards streamed into the bar, battered them to near-death, and dumped them in the street.

SLAVE TO GRAVE

I dropped a bounty off, only to find all the cells full. To make room, I broke a prisoner out. The freed captive was then killed for being a fugitive.

TAX INVASION

A nearby city sent a squad to rough me up for tax evasion. I hired some mercs, made a murder party in my camp, and looted all the bodies.

WHY SHOULD I CARE?

+ You live for random encounters

+ You live for toil

+ You can see the fun through the bugs

VERDICT:

Work through the ugliness and technical awkwardness and you'll find an experience of frightening depth.

8

Insurgency: Sandstorm

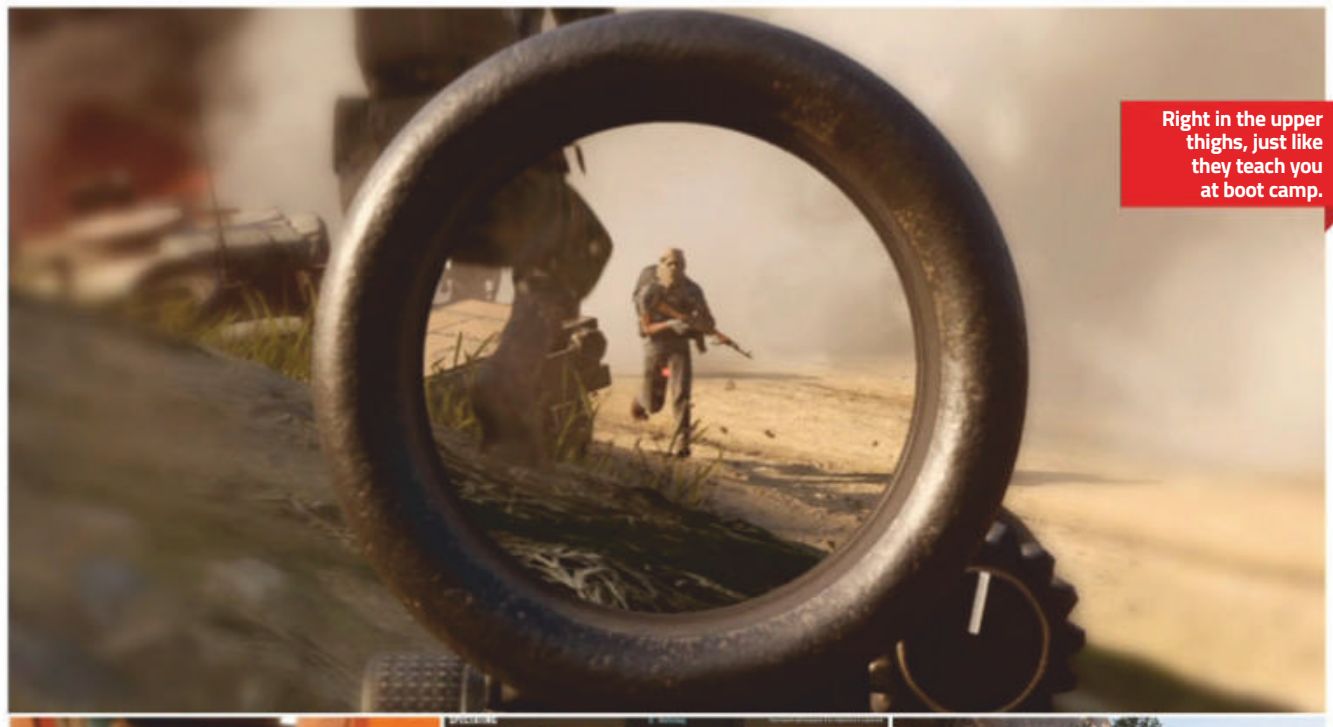
Eclipses blockbuster military shooters on a fraction of the budget.

DEVELOPER NEW WORLD INTERACTIVE • **PUBLISHER** FOCUS HOME INTERACTIVE
www.insurgency-sandstorm.com

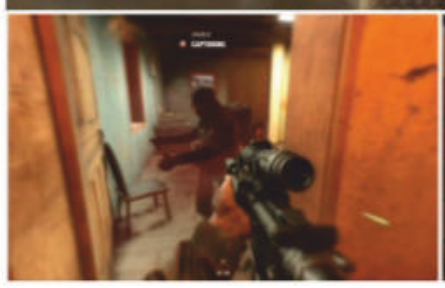
I'll never forget the screaming. We'd just locked down checkpoint C, a three-storey townhouse in a war-torn village, and the six of us had taken up positions guarding all windows and entry points, waiting for the counterattack. First a silence, then a racket of assault rifle bullets and panicked shouts. We were repelling them. The timer had almost expired. Then a squadmate threw a speculative incendiary grenade at a doorway, and the screaming started. The area was being contested, and the insurgent contesting it had just been set alight. The round ended with six of us watching in mute horror as he crawled, wailing, through the fire, into the hallway where he eventually expired.

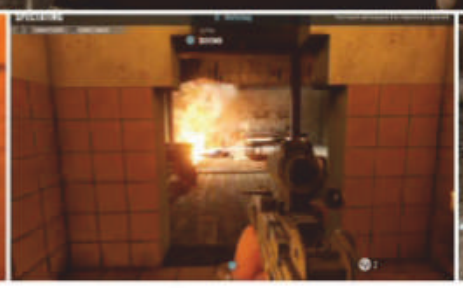
This unscripted moment from one of Insurgency: Sandstorm's eight-player co-op matches against waves of AI forces really does speak to its qualities. Not just the eerily convincing soundscapes it conjures, full of dialogue and terrifying reverberations, and not just the inherent tension of its control point-based modes. It also demonstrates an ability to convey the ugliness and horror of modern military combat, without the need for overwrought scripted sequences as with Battlefield and Call Of Duty. Not bad for a franchise that started life as a Half-Life 2 mod.

Sandstorm is equally brilliant as a co-op or competitive multiplayer game, offering competent large-scale 16v16 fights featuring vehicles, but really excelling at tighter encounters on maps with fewer combatants. The exact nature of the conflict you're fighting and dying for is nonspecific but the reference points span Black Hawk Down to Zero Dark Thirty via The Hurt Locker. In among the men in bomb vests sprinting at you and the RPG fire, what stands out in particular is that no one's playing the hero. Instead, every player-controlled and AI soldier sounds terrified. They shout out when they spot an enemy, when they need to reload, or when an objective state has changed, but they never sound like they're relishing the fight like Call Of Duty's psychopathic operatives do. They're bricking it, like any sane person would be.



Right in the upper thighs, just like they teach you at boot camp.





> You can take pride in playing like a professional soldier.

WHY SHOULD I CARE?

+ You're always Oscar Mike
+ You actually love sand
+ Tactical shooters are your THANG

The game's soldiers have plenty of reason to sound terrified in a given match, treated to very few lulls in the action and bombarded by surprise attacks. Co-op consists of a series of checkpoint captures, in sequence, while AI combatants attack each one in waves.

Weapon behavior takes a bit of getting used to, mind you. There's no extra layer of visual or sonic feedback for successfully shooting an opponent, so you're sometimes at a loss as to whether your long-range shots connected or not. It's a concession to realism that Insurgency: Sandstorm absolutely convinces you is worth making. Eventually the absence of hit confirmations becomes something you actively enjoy. The active reload system is another thing you can take satisfaction in mastering. Here, more than anywhere except arguably Arma, you can take tremendous pride in playing like a professional soldier and forgetting about your kill-death ratio.

If nits must be picked, it's the vehicles that stick out for their rough and ready implementation. Even with those creases, I haven't played a multiplayer shooter as exciting as this for ages, and I'll be coaxing friends into its co-op mode for months to come. I'll also try—and fail—to describe just how good it sounds from moment to moment to anyone who'll listen. See you at checkpoint C. ■

PHIL IWANIUK PC

INTEL ON SANDSTORM'S COMBAT ROLES

COMMANDER
Stick close by to an observer and you can call in artillery strikes on the enemy.

OBSERVER
The Laurel to the Commander's Hardy. Gets to radio in the big guns.

BREACHER
Close-quarters specialists who live and breathe shotguns. Scary folk.

VERDICT:

In this most well-travelled of multiplayer FPS paths, Insurgency: Sandstorm feels fresh and exciting at every turn.

8

Gris

Painterly platformer aims to explore grief.

DEVELOPER NOMADA STUDIO • **PUBLISHER** IN-HOUSE
www.nomada.studio

Shifts in palette accompany shifts in mood.

Gris is beautiful. It is beautiful in that highly stylised, minimalist way that works well in both 2D platformers and in art prints. It is beautiful in its carefully chosen color palettes and its delicate animation effects. However it is beautiful in ways that both strengthen and weaken it as an overall experience.

Gris is a 2D platforming mood piece about navigating grief. You play as a nimble, blue-haired girl, and you must gradually bring color and life back to a world of monochrome ruins. To do this, the girl must jump, float, swim, and slam her way through stunning environments, collecting glowing lights and adding them to the sky above a hub area as constellations.

Tonally, Gris inhabits the same arena as Journey, Abzu, Unravel, Flower… perhaps Monument Valley too, although not as closely due to the latter's puzzle elements. Gris isn't a puzzler, it's a platformer with a set of interactions which feel geared around sensory pleasure—you end up luxuriating in its environments and effects, or enjoying the smoothness of a set of movements.

To give an example, clusters of red butterflies boost your jumps. In another game this boost might feel like part of a toolkit for exploration, but Gris has generally linear progression. At that point, the boost isn't a tool it's part of the level's built-in choreography.

As an exploration of grief, or an emotional journey, Gris finds mixed success. Its determination to be beautiful is a problem, as it means the ugly and destructive sides of grief or loss are absent.

The closest you get in terms of what the girl can do is the ability to turn her cloak into a heavy cube and use it to smash vases, punch through floors, or plummet deeper into the water. It's destructive, sure, but also controlled and purposeful. The wilder, scarier side of grief is cut off from her; cauterized in favor of fluid, deliberate action. It's perhaps found in some of the shadowy creatures pursuing her, but that's external rather than internal.

The other problem is that the grief is never effectively localised to a particular person. Is the girl the one grieving, or is it her companion (she seems to be the one shattered into pieces)? Being ambiguous isn't a problem, but I felt unable to read the basic coherently.

PAINTING A PICTURE

This next paragraph is a spoiler so skip ahead if that's your jam.

Another issue I have is that the ending of the game is positive; a reunification of sorts. I find it to be a stumbling block when considering Gris as a representation of grief. It's too neat; a manifestation of the idea that grief ends when I don't believe it ever does. One of the best descriptions of grief I've ever heard is about how grief is not a specific feeling, but a reckoning with what can't be undone.

Gris is beautiful, but that beauty means it's only capable of touching on some of the facets of loss. It manages some of the sense of being at the mercy of the outside world. The way it plays with scale shifts your focus from the girl to the world and back again; a tool for simulating numbness or distance.

But it can't do the same for rage or guilt or the way your insides seem to be absent sometimes. The beauty gets in the way there. The overall effect for me ends up being elegant but detached. A slightly muddled compendium of the picturesque sides of grief. ■

PHILIPPA WARR PC

WHY SHOULD I CARE?

+ You find beauty in loss.

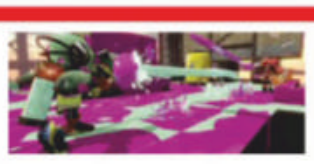
+ You want art in your games.

+ You want to know how it ends.

COLOUR IN

DE BLOB
Pick up paint and smear the city with color by touching it with your character's body.

THE UNFINISHED SWAN
Fire blobs of ink into a plain white world to reveal the 3D landscape.



SPLATOON
Nintendo's third-person shooter swaps bullets for ink which covers the play area.

HUE
Change the background color of the world to reveal or hide objects and solve puzzles.

VERDICT:

Gris's visual appeal hinders as much as it helps its attempted exploration of the grief process.

7

Dusk

perfectly captures and reloads the joy of classic '90s shooters.

DEVELOPER DAVID SZYMANSKI • **PUBLISHER** NEW BLOOD INTERACTIVE
https://jefequeso.itch.io/

I was just about hip-deep in corpses and spent shotguns shells when I read the writing on the wall. Scrawled in blood, a message: 'Don't go in the ruins.' I heard a raspy noise behind me. It wasn't quite an animal sound, but it wasn't human, either. I turned and found something much worse than a bad guy. A closed door marked Ruins Access. The raspy breathing came again from just behind it. I felt an actual chill run down my back.

Dusk is a homage to late 90s corridor shooters like Doom, Quake and Half-Life. It's also a love letter to weird cultist horror films like The Hills Have Eyes and Deliverance. More importantly, it's great.

Waking up hanging from a meathook is at least the third-worst way to wake up. At the beginning of Dusk, I'm meathooked, trapped in a hostile world, and mostly unarmed. Like the 90s shooters it draws inspiration from, the first tool Dusk gives players is speed. Pressing the forward button zips me along the ground, and, charmingly, bunnyhopping adds momentum just like it used to in the old days. With a heavy W-finger and a lot of jumping, exploring the creepy farmhouses and industrial buildings of Dusk's first chapter felt like touring a videogame art museum on a motorcycle.

It's not speed for speed's sake; I'm moving fast because it's the only way to survive. There are a lot of different enemies in Dusk, from possessed scarecrows to hooded Klansmen throwing dark magic, but almost all of them charge straight ahead with melee attacks or shoot swarms of projectiles at me. The variety of enemies, some big, some small, shooting bullets that move at different speeds, makes every fight a constantly changing obstacle course. The only way to navigate a crowded field of shooty monsters and bullets is to move, to run circles around the bad guys, kite them into big groups or toward explosive barrels, and shoot as fast as I can.

Speed is the first, but it's not the only tool. Starting with a pair of sharp sickles and moving up through the traditional FPS loadout closet, I shot demons and bad guys with pistols, lever-action rifles, double-barreled super shotguns, assault rifles, sniper rifles, and grenade launchers. The most unexpected weapon I've found so far is the Riveter, a bulky steel box that launches hot construction-grade welding rivets that, for some reason, explode spectacularly. I'm not sure why a rivet driver might act this way, but it is extremely enjoyable.

Is it a ghost? Not sure, but it dies if you shoot it.

WHY SHOULD I CARE?

+ You think the 90s is the best decaade.

+ Hint: you are correct

+ You never met a corridor shooter you didn't like.

The blocky graphics in Dusk are its most obvious throwback reference to the era of games it idolises, but damn if they don't look great anyway. The sharp polygons of enemy bodies might be two decades out of date, but very modern takes on advanced lighting and particle effects did a lot to make me feel interested in exploring and blowing up the world around me. The limited polygons and low-res textures have a jagged, unreal quality that makes corn mazes look creepy and country churches look properly cursed by evil magics.

The singleplayer portion of Dusk is broken into three campaigns. Starting from that first moment in that weirdo's murder-dungeon, I fought my way through farms, industrial zones and apartment buildings until I had completely wiped out the cultist and/or demon population of Dusk, Pennsylvania.

SEEK AND DESTROY

This is where Dusk became more than a parody or homage to a once-ubiquitous genre and started kicking ass on its own terms. The bare, pixelated corridors of yore have been replaced by low-poly, but recognizable and memorable, level and environment design. I only ever discovered hallways in classic Doom, but in Dusk I fought bad guys in bars, bookshops, bedrooms, labs, hay lofts, gas stations, and convenience stores.

Dusk insists on using the classic trope of locked doors and colored keycards.

CLASS OF 1990-ISH MORE GREAT RETRO-STYLE SHOOTERS

QUAKE CHAMPIONS
Price: Free-to-play
Link: www.bit.ly/quakechamps
It's the old-school gunplay of a '90s arena shooter combined with more modern FPS touches, including a roster of characters all with distinct abilities. Amazingly, it works.

XONOTIC
Price: Free
Link: www.xonotic.org
If you want your arena action more pure and open, Xonotic is your best bet. Thanks to an active community of creators, it offers thousands of custom maps and modes.

DEVIL DAGGERS
Price: £4
Link: www.devildaggers.com
Short on time? A round of Devil Daggers can last just seconds. This is an intense and eerie arcade shooter that asks how long you can survive against a hellish horde.

Gibs are like the guns that make them: The chunkier, the better.

Meeting a scarecrow in a cornfield is terrifying, but at least you've got big guns.

> "Dusk's first chapter felt like touring a videogame art museum."

The graphics don't look like much, but a blood geyser is good clean fun any day.

Dusk may look retro, but it feels refreshingly modern.

Shoot explosive crates and barrels to take down mobs.

Modern shooters have mostly left that conceit behind because it makes players do a lot of backtracking through empty levels. Having distinct environments filled with recognisable decorations like furniture goes a long way to fixing this problem, though. I could usually just think to myself, 'Oh, the yellow door is in the book store,' and go find my way there quickly enough. Clever changes in geography, like a floor falling in or a hidden door opening, also help mix up paths through levels.

More than that, developer David Szymanski has a talent for environmental storytelling that goes way beyond the tableaux I've discovered in games from much larger studios. Once, while venturing through a pitch black subterranean jail with a flashlight, I got hit from behind. I turned and fired, but there was nothing there. Then, in the cone of my flashlight, I saw blood spatters in the shape of footprints moving toward me, marking the steps of an invisible bad guy.

I started shooting, and a demonic deer-type creature roared out of the darkness and attacked again. I dodged and shot, and finally the deer collapsed at the base of a wall. Immediately above the fresh corpse, I read by my flashlight another message in blood: 'Don't trust your eyes.' This moment of discovery, and the sensation that the game was toying with me, was better than any dozen skeletons I've discovered in post-apocalyptic toilets.

Each level is surprisingly compact, using those color-coded locks to send players running back and forth across relatively small spaces. Still, every area is full of tiny corners and hidden walkways. Sometimes, but not always, pressing a piece of wall opens a hidden door or shooting an air grate blows open a secret passage. Without rushing, the average Dusk level took me about 12 minutes to finish. These bitesized pieces of mayhem and action made it really easy for me to pick up Dusk and put it down a few minutes later, and the built-in level timers will be great for speedrunners.

CRAZY TRAIN

I had no issues running Dusk on my GTX 970 at its highest graphics settings, and I saw rock-solid framerates in crowded rooms full of exploding barrels and blood geysers. You would expect a game with a retro look not to struggle on modern hardware, but I was still happy to see Dusk run smoothly even in a firefight's most frantic moments. When I bunnyhopped my way to top speed and tore through a level with a fully-stocked grenade launcher, even minor stuttering or screen tearing would have been a disaster.

This church seems very welcoming.

Facing a trio of chainsaw guys isn't exactly fair, but it is fun.

ABOVE: When the music ramps up, grab your biggest gun and start running.

Dusk's soundtrack is also phenomenal. It's got a heavy metal flavor that makes me think of Doom — no surprise that it was written by Andrew Hulshult, the composer behind Brutal Doom and Quake Champions — and it's a stunner. It's also got a relentless, driving quality that makes me think more of Mad Max: Fury Road than Rip & Tear.

Dusk's multiplayer mode is a more direct throwback to the original Quake, and it wasn't as successful at grabbing my attention. The high-speed bunnyhopping makes aiming at human opponents much more challenging than singleplayer modes, and fans of old-school Quake deathmatches will enjoy searching levels and memorising spawns for the strongest weapons. Matchmaking was fast and rounds start with very little downtime. The guns still feel strong and punchy, and the arenas I explored used a lot of vertical space to bring battles way above and below ground level.

I think I was much less taken with the multiplayer modes because they felt like more direct recreations of '90s classics like Quake. To be clear, the multiplayer mode is completely fine. But when the singleplayer is this good, a 'fine' multiplayer mode was bit a of a letdown. Multiplayer lacked the careful reinvention, the painstaking spiritual reimagination that the singleplayer mode captured so effectively. Maybe it's not fair to expect Szymanski to capture lightning in a bottle twice, but there it is.

My dissatisfaction with multiplayer helped me zero in on what I love so much about Dusk's singleplayer. It just isn't enough to remake old games with old graphics. After all, the originals still exist. No, Dusk is brilliant because it understands that replaying those old games is frequently kind of a letdown. Half-Life is a classic, but playing it today shows how different parts of it haven't aged well. The graphics are more bare than in my memories, and the animations are more stilted. It was groundbreaking, but it's just not quite as fun as it was when it first blew my mind in 1998. Dusk doesn't recreate what FPS games were like in the '90s just to do it again. Dusk instead captures how those games feel now in my mind, tinted by 20 years of rose-colored memories. It shouldn't be possible, and it's a remarkable achievement. ■

IAN BIRNBAUM PC

VERDICT:

A obsessively tuned, finely crafted shooter that captures and recreates the speed and pure joy of 90s classics.

9

Ashen

A thoughtful, engrossing Soulslike that wears its inspirations on its blood-stained sleeve.

DEVELOPER MODE 7 GAMES • **PUBLISHER** IN-HOUSE
www.frozensynapse2.com

Some people will argue the 'Soulslike' label needs to die. They'll tell you it's overused, hackneyed, and that there are other catch-all terms to describe hybrid ARPGs, which don't rely on comparison. I think these people are wrong. Ashen, a low-fantasy action roleplayer, closely echoes many of the ideas and systems found in FromSoftware's Dark Souls series. It knows exactly who its audience is, and, for all intents and purposes, is a Soulslike game.

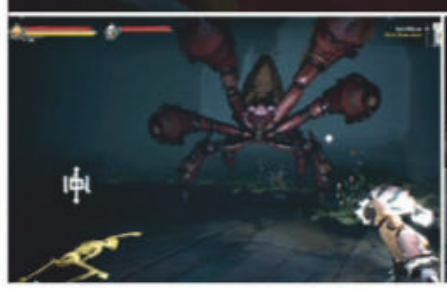
In place of Estus Flasks, for example, Ashen gives players sap-filled Crimson Gourds that deliver health boosts in limited supply. In the absence of Souls, Ashen trades in Scoria — a currency farmed from fallen enemies that helps facilitate progression. Gathered Scoria is lost upon death, and can only be regained in your immediate next life. Ashen's enemies are tough, its bosses are blockbuster, and its gorgeous handcrafted world is littered with lore and odd but charming NPCs.

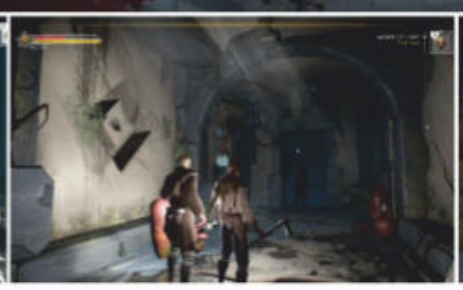
So similar to the Soulsborne series is Ashen that these comparisons will inevitably attract or avert players from the outset. This reflects the polarising nature of this style of game, but, by setting out its stall with precision and conviction, Ashen never feels cynical. Ashen also leaves little room for learning curves during its 20-ish hours runtime. But I reckon it's all the better for it.

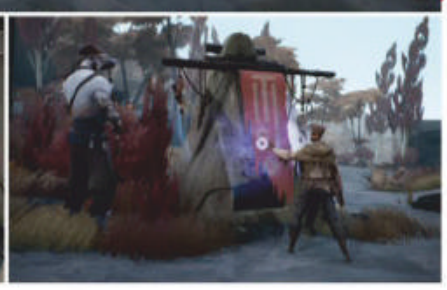
In the wake of the game's titular 'Ashen' rebirth, Ashen paints a familiar tale of light versus dark, which ultimately boils down to: all the goodies in the world want the light to survive, and all the baddies want it extinguished.

Ashen regularly switches from open world to claustrophobic grotto during the game's scores of quests, requiring you to adapt your playstyle accordingly. Early on, I found myself fumbling around the Restless Knoll; a large wooded area filled with spear-wielding enemies. Encountering two foes at the foot of a hill, I let my AI-controlled NPC partner Jokell engage them from the front as I snuck back around and got the drop from above. It was a markedly different style of play to when we later plumbed the depths of a Tomb of the Giants-style dungeon, brimming with traps, winding corridors and shadow monsters.

A double-handed weapon will make short work of shield users.







WHY SHOULD I CARE?

+ MORE DARK SOULS

+ You too want to save the light

+ You think everything is better with a buddy.

OBSERVE AND OVERCOME

In any fight, understanding the lay of the land is crucial, and while conflicts out in the field can be judged in advance, battles indoors often unfold in tight, dimly-lit areas. Different weapons have different stamina demands, and shrewd use of light and heavy attacks is essential for survival. Do you steam in with an RMB double-handed axe smash and hope for the best, or do you offload a flurry of LMB light attacks and Shift dodge your way to success?

And speaking of friends, Ashen's co-op is wonderful. AI companions offer sidequests and will often tag along for the journey, while you can band together with real-world players for specific missions and part ways whenever you so choose. Here the 'Soulslike' label is a compliment not a pejorative. Yes, Ashen echoes the core mechanics of Dark Souls, but it does so with such finesse that it hardly matters.

JOE DONNELLY PC

DOPPELGANKER COMPARE AND CONTRAST ASHEN'S SOULSLIKE SYSTEMS

GEAR
Ashen's 'Gear' menu is reminiscent of *Dark Souls*, with its cyclable weapons, outfits, consumables, and buffs.

ARTIFACTS
Likewise, *Ashen*'s 'Artifacts' tab houses special items—each of which has its own suggestive lore snippet.

JOURNEY
The 'Journey' menu, however, provides map information, and reflects the likes of *Skyrim*.

VERDICT:

Ashen's slant on Souls isn't revolutionary, but is a wonderful example of the familiar formula executed well.

8

Catherine Classic

Cheat on your partner and pay the price in an offbeat mix of puzzle game and life sim.

DEVELOPER ATLUS • **PUBLISHER** SEGA
www.catherinethegame.com

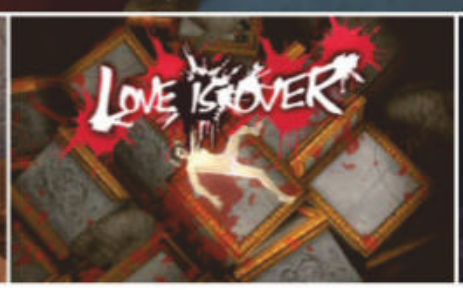
What next, Persona 5 on PC? It's hard not to believe that'll happen someday soon, now that I have got Catherine in my Steam library. It's been an exciting few years for previously console-only cult classics coming to PC, especially from the likes of SEGA. Catherine is a real oddity: Part-relationship and life simulator, and part-pretty good block-climbing puzzle game.

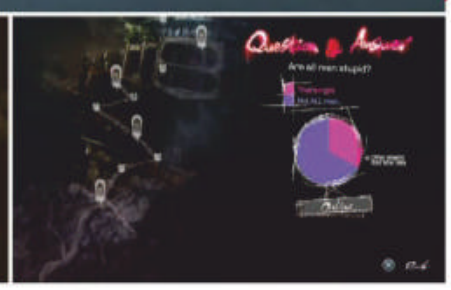
What's appealing is its unusual subject matter. You're Vincent, a 30-something in a long-term relationship with Katherine, who wants to settle down, and for Vincent to find a better-paying job. Vincent, though, wakes up next to another girl called Catherine. After cheating, he begins to experience nightmares where he's in his underwear, climbing towers of collapsing blocks.

The main part of the game is climbing and pushing the blocks in order to ascend these towers, dealing with occasional modifiers like slippy blocks made of ice, or blocks that are traps. It's about figuring out your next few moves in advance: building a staircase to reach the next rung of the column, or pushing out a few base blocks to make the entire tower drop down by one.

At the end of each set of levels, a kind of boss creature appears, manifesting as one of Vincent's worries: a giant screaming demonic baby, for example, or a giant evil butt (seriously). It can be incredibly tricky, and it's possible to push enough blocks away to make it impossible to reach the exit at the top. Luckily, there's a rewind function to take back your last few moves.

Cheating lands you in this cheery place.





WHY SHOULD I CARE?

+ You just have a lot of love to give, man.

+ Your life is already an uphill battle.

+ You have a werid fetish for partners with the same name.

The life sim element of the game breaks up these intense puzzles. Before Vincent sleeps, he hangs out with his friends in a bar. Here he interacts with his pals, some of whom admonish him for his cheating, as well as the interesting patrons of the bar who all have their own stories.

I like Catherine as a puzzle game, but I don't love it. The towers are repetitive to climb, and a couple of the modifiers are really annoying: being knocked off a specific block by a boss's super ability, for example, or encountering enemies who can knock you down as well.

I actually think Catherine is slightly stronger as a life sim, where you can pore over Vincent's situation, and make decisions based on what you think is right or wrong. You can text back both Katherine and Catherine, and whatever you choose to put in the text from a number of predetermined options will push a good or evil slider a certain way.

CHEAT CODE

You don't shape the story, really — mostly just the ending — but the subject matter is so unusual that just being asked these things by a game is refreshing. Its portrayal has some problems. By never remembering the times he sleeps with Catherine, he doesn't really have to take responsibility for it. Likewise, Katherine's depiction in the game frames commitment as being this incredibly scary thing that's being inflicted on Vincent.

Catherine, meanwhile, represents the opposite of that—she's interested in Vincent and designed to be the object of his lust, allowing him to throw aside the things he's afraid of and cheat. Both women are depicted as controlling figures in his life and not much more. It's such a strange combination, to have these puzzles and life sim elements awkwardly welded together, but it just about works. While my opinion of its themes changes the older I get, I still find being asked questions like, 'Who's responsible when someone cheats?' by a game exciting. *SAMUEL ROBERTS* PC

VERDICT:
An odd hybrid of life simulator and puzzle game where both flawed halves somehow work well together.

7

PERSONA SHOPPER **OTHER ATLUS GAMES THAT SHOULD COME TO PC**

SHIN MEGAMI TENSEI 3: NOCTURNE
I loved this moody JRPG, which is like a more grown-up *Pokémon*, featuring Dante from *DMC* for some reason.

PERSONA 4
The *Persona* games blend RPGs and life sims together in a way that's really interesting—and this game's small town setting is a neat backdrop.

PERSONA 5
The latest entry in the series is considered its best yet, and Phil spent over 100 hours binging it on his couch to deal with mag deadlines.

Ace Combat 7: Skies Unknown

Presents a spruced-up goose.

DEVELOPER BANDAI NAMCO STUDIOS • **PUBLISHER** BANDAI NAMCO ENTERTAINMENT
www.bandainamcoent.com/games/ace-combat-7

Aerial combat games can be split down the middle, more or less, according to which half of the '90s they hark back to. Is it an ode to After Burner, all effortless loops and rolls? Or is it the kind of rigorous flight sim that flew so high in the decade's latter half, almost invariably taking its name from a plane (see Falcon 4.0, B-17 Flying Fortress, et al), where even correctly retracting your landing gear is a real achievement.

You don't need me to tell you that Ace Combat 7 is the former. You can see by the screenshots, by the very name, that this is about getting you up in the air and feeling like Maverick ASAP, laws of physics be damned. It's the latest in a 23-year-old franchise devoted to just that, no less. And on those terms, it's a roaring success.

As with its predecessors, there are two different flight models available here, one professing to offer a simplified handling experience while the other offers a deeper simulation. In truth, neither one is particularly taxing, and the most discernible difference between them seems to be increased control of yaw and pitch in simulation mode. It's Need for Speed handling in the air then, essentially, and there's nothing inherently wrong with that. After an hour or so of chucking a fighter jet about with abandon, though, you do feel a desire to test your flight skills further than either model truly allows.

No, instead that challenge must be gleaned from Ace Combat 7's missions. They start off pedestrian, but kick into gear after three or four levels to reveal an unhinged campaign. What begins as 15 minutes of shooting at radar towers and the odd enemy fighter quickly descends into boss fights against impossible constructions, battles with drone swarms, and navigational setpieces straight from a Universal Studios ride. The demands of Ace Combat 7's campaign are matched perfectly with its accessible approach to flight simulation, throwing improbable machines and scenarios at you simply because it can.

Make it back to base after one of these delirious encounters, and you'll earn some currency to spend on new weapons, plane upgrades, and entirely new aircraft via a huge and elaborate tech tree. The improvements to maneuverability are subtle when you upgrade a plane, but weapon additions can make you much more effective in certain missions.

But is there variety? It seems poor to even ask when you've just concluded a mission that requires you to navigate collapsing skyscrapers, but no, there isn't. Despite all the bluster, it's hard to shake the fatigue that comes with your 100th dogfight. The settings change around, and sometimes the environment itself poses a hazard, but in the simplest terms the gameplay loop doesn't evolve beyond aim, lock, and fire.

TURBULENCE

There are more obvious negatives, though, like the unengaging cutscenes between missions, which hand on heart I really did try to follow, but... nah. I'll not dwell on what's ultimately a subjective aspect of the game, though, but will instead sing Ace Combat 7's praises for looking great without overly taxing your PC (there's even a downsampling option!), but mostly for keeping the early '90s arcade flight sim alive, prettier and weirder than ever. ■

PHIL IWANIUK PC

WHY SHOULD I CARE?

+ You're a rusted on fan.

+ You still have nightmares about Falcon 4 (me too).

+ But you can be my wingman any time.

COME FLY WITH ME
NAVIGATING ACE COMBAT 7'S AIRCRAFT TREE

F-4E
Where it all begins. It's capable and nippy, but those stats... yeesh.

SU-30M2
A formidable Russian Air Force classic, all undulating lines and missiles.

F-22A
The priciest fighter, and with reason: These are $150m per unit IRL.

VERDICT:

Uncomplicated but gratifying flying, in scenarios of increasing silliness and likability. Tedious story, though.

7

Onimusha: Warlords

A fun relic, if you can stomach how old it feels.

DEVELOPER CAPCOM • **PUBLISHER** IN-HOUSE
www.onimusha2001.com

Onimusha is a series that burned brief and bright for Capcom. It began in 2001 and was pretty much over by 2006, encompassing four main entries and two spin-offs. The original isn't the series peak, but it's a fun relic of the era of survival horror games that was popularised by Resident Evil. I would only play this re-release in 2019 if you're an old fan, or curious about this generation of games that never had much of a presence of PC.

Onimusha is an offbeat series, a mix between historical epic and fantasy that sadly didn't survive the leap to the HD era like Resident Evil and Devil May Cry did. While the second game — with its innovative trading system, multiple playable characters, and branching storyline — is the series' only masterpiece, the first game is still a fun curio from the Resident Evil lineage of fixed-camera action games. You play Samanosuke Akechi, a warrior who ventures to save Princess Yuki from Nobunaga and his army of demons. After being owned by the first big monster he encounters, he's revived by a collective of ogres with a gauntlet that can absorb demon souls.

Even next to Capcom's Devil May Cry from the same year, which featured 3D backgrounds, a more active camera and faster combat, Onimusha feels retrograde. You mostly spend the game wandering through tightly-wound corridors full of demonic enemies and key-based puzzles. Calling it Resident Evil with swords, which is pretty much how the media described it at the time, isn't far off.

The combat is still nice and crunchy, though. Sword fights with enemies are paced like considered duels compared to DMC's acrobatic flurries, and you really feel it when the blade connects with an opponent. Enemies spend more time circling you than windmilling, and a well-timed sword press will land an instant counter kill. The fixed camera angles do suck, though: If you're fighting an enemy and they suddenly vanish off-screen, it's pretty annoying.

The voice acting is still terrible, too — what could be a horror-tinged and creepy story is undermined by campy enemies and bad lip-syncing, both products of their time. This stuff might be annoying to acclimatise to if you never played these kinds of games about 20 years ago.

The additional options in this PC version are super limited. You can remap the controls and change the resolution, but that's it. The main issue with this version is some noticeable screen tearing, particularly during cutscenes. The framerate counter kept a steady 60fps throughout my playthrough, but to my eye it doesn't really look any smoother than I remember it on PS2.

The dialogue is awful, and delivered poorly.

WHY SHOULD I CARE?

+ "HAHA, IT IS YOU, I KNEW YOU'D READ THIS!" is a joke you appreciate.

+ You can't say no to nostalgia.

+ You love a good sword fight.

CULT CLASSIC?

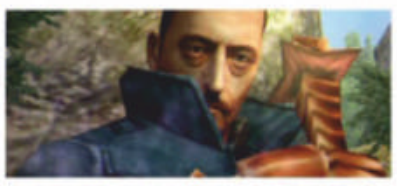
It's also not a particularly long game at about five or six hours — the asking price of $20 isn't unreasonable, but I would probably have preferred to have three or four of the original games in one package for a higher price, like the Devil May Cry collection. Nonetheless, for completists, it's a start.

Much as I complain about Onimusha feeling old, I am absolutely the target audience for this re-release, and I had a lot of fun treating this playthrough like a speedrun, given that I finished the game five or six times on PS2. I'd struggle to recommend it to anyone below the age of 30 who grew up with prettier and more refined third-person action games, but if you were there at the time, Onimusha remains an important part of a golden era for Capcom during the early '00s. ■

SAMUEL ROBERTS PC

WHAT COMES NEXT? THE REST OF THE ONIMUSHA SERIES

ONIMUSHA 2: SAMURAI'S DESTINY
Trade with the allies of your choice and unlock different storylines in this high point for the series.



ONIMUSHA 3: DEMON SIEGE
Starring Jean Reno, this offbeat sequel came to PC but was removed from Steam last year.

ONIMUSHA: DAWN OF DREAMS
Released in the dying days of the PS2, I felt like this first fully 3D entry was mostly ignored, ending the series.

VERDICT:

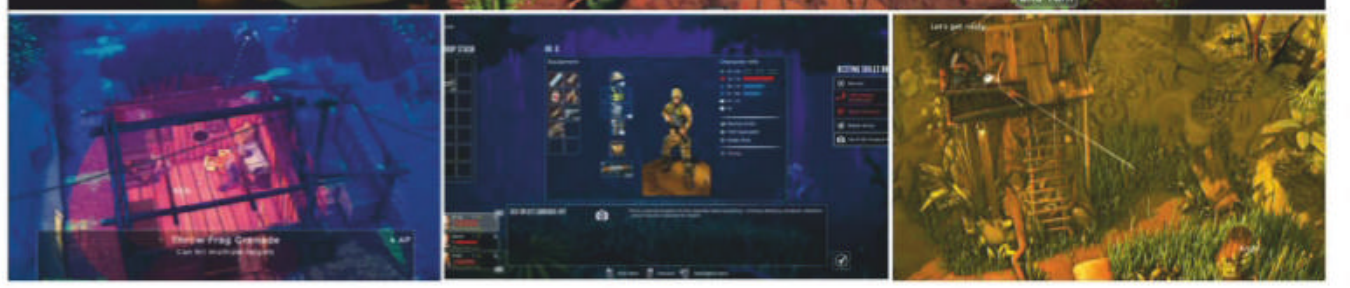
A fun relic of the early PlayStation 2 days that I still like a lot, but is slightly too dated for most players to enjoy.

7

Jagged Alliance: Rage

All busywork and no play.

DEVELOPER CLIFFHANGER PRODUCTIONS • **PUBLISHER** HANDY GAMES
jaggedalliance.com



Jagged Alliance: Rage is in love with busywork. At every stage of the game I'm bombarded with basic maintenance tasks, survival elements, weapon degradation and looting—so much looting. It wouldn't be so bad if there was more variety to the combat, but sadly I found myself using the same few tricks over and over.

It works like this: You take your two mercs (you won't unlock another for hours) and liberate a jungle island one turn-based combat encounter at a time. Each merc is a bundle of skills and quirks. This is the game's biggest strength, as each character feels different, if not exactly balanced. Raven is a sniper who can't carry heavy weapons. This is more useful than Ivan, a tank whose bad knees hurt him every time he jumps down a step.

The story is as deep as it is original — which is to say not at all — yet takes up a surprising amount of time, full of conversations I quickly checked out from, but couldn't skip. It can't decide if it wants to be gritty (they're kidnapping children!) or cartoonish (they're mind-controlling people!). The mercs are, to put it charitably, a broad collection of national stereotypes. The one clever idea the game has is to emphasise how old they all are.

The fact that you only get two mercenaries to start with is important, because those opening few hours are brutal. I haven't played any of the previous Jagged Alliance games, so I don't know if they were always this hard, but even as an XCOM veteran I was initially worried I wouldn't be able to finish more than a few levels. Things do get a little easier a few hours in when you've managed to scavenge some armor and healing items, but even then you're often saddled with awkward objectives that force you to take action before civilians are killed. The result is a game that often needs you to stealthily kill half the enemies on the map before you get spotted, which isn't easy when your two soldiers are often facing 20 guards.

WHY SHOULD I CARE?

+ You love a challenge...

+ Your knees hurt too

+ You just NEED more Jagged Alliance

MAKING CAMP

The difficulty is also increased by the fact that there is no post-mission recovery. Your wounds from the last battle carry over to the next one unless you rest, which carries the risk of being discovered by a patrol. The only equipment available is that which can be looted from corpses and containers.

There is an overmap, though, which enables you to traverse the island, moving your troops from node to node while pursued by enemy squads. In theory you can avoid these, especially as the game eventually gives you a squad of rebels you can use to delay them. In practice you'll almost always end up getting caught in a series of frustrating ambushes, especially as the troops move while you rest to heal up and repair your weapons.

The good news is that we're living in a golden age of turn-based tactics games, and both Jagged Alliance fans and the rest of us can do better than a lukewarm game with a beloved name. ■

TOM HATFIELD PC

WELCOME TO THE JUNGLE AN INTRODUCTION TO THE ISLAND OVERMAP

1 ALLIED
Your rebel allies can delay enemy troops.

2 TAKE A BREAK
Resting is vital to heal, craft, and repair your troops' weapons.

3 ON THE MOVE
Enemy squads can move once a turn, even when your own units are resting.

4 STORY NODE
A major objective, useful for advancing the story.

5 SPAWN POINT
A guard post, these continually spawn new armies until defeated.

6 'OPTIONAL'
An optional objective (but in reality you'll do them all).

VERDICT:

Too hard, too dull and too much, Jagged Alliance: Rage is a sequel that doesn't live up to the success of its forbears.

4

Below

There's mystery but not enough magic.

DEVELOPER CAPYBARA GAMES • **PUBLISHER** IN-HOUSE
www.whatliesbelow.com

Like a reverse-world version of Hideo Kojima's solar-powered dungeon-crawler Boktai, Capy's uncompromising roguelite demands to be played in total darkness. Here, you'll find yourself instinctively leaning in to better make out your minuscule character and their surroundings. It may not do much for your posture, but you'll feel a physical connection to your brave adventurer, likewise peering anxiously into the gloom.

An very slow opening sees the camera descend towards a tiny speck that becomes a sailboat, tossed around a roiling sea. Eventually, it lands, and you begin a long climb to the labyrinth you're here to explore.

In its early hours, Below is heady, powerful stuff. Its aesthetic works wonders with scale, leaving you feeling vulnerable. Its gloomy environments are shrouded in a mist that only clears as you inch forward, sword and shield at the ready. As your every action echoes around the rocks, Jim Guthrie's score steels you for the perils to come.

It's economical in other ways, too. Below gives almost nothing away; gratifyingly, you learn only by doing. And though a few lessons are learned the hard way, it's generally a pretty good teacher. Take the crystals dropped by the creatures you encounter early on: These power your lantern, which illuminates the nearby area, but also activates mechanisms and reveals secrets. But the gems have a habit of bouncing off ledges if you swing your sword at everything. As such, you're better off using single, precise swipes, or jabbing from behind your shield.

If you are hit, you'll usually start bleeding: you can either apply a bandage you've found or crafted, or cauterize the wound at a brazier. Lighting it takes a few fraught seconds, however, and enemies will mercilessly target you when they know you're occupied. It's this tension that means surviving several rooms' worth of red lights unscathed leaves you feeling thrillingly alive, and spotting a campfire to rest at brings a warming feeling of relief. Here you can sleep and visit a dreamlike hub where you can leave items for your successor — albeit at the cost of leaving yourself short.

Gentle tip: You might want to prepare before you enter here.

WHY SHOULD I CARE?

+ You love feeling small

+ Dungeon bashing is in your blood

+ You want to keep going down

POCKET CAMP **ENJOYING THE RESPITE OF BELOW'S HUB**

1 GEAR
Helmets and armor let you soak up a few hits. You can store them here for the next poor sap.

2 PROVISIONS
Combine water and three foodstuffs—vegetables, meat, or fungus—for a restorative brew or stew.

3 COSMETICS
Marbles you find on your travels slot in here to add decorations, like chairs and lights.

4 STORAGE
It looks innocuous, but under the large stone here you can secrete your light crystals.

This calculated risk is part of what makes Below so absorbing, but its ruthlessness too often tilts over into unfairness. Enemies can sometimes hit through walls, while in a game where split-second timing is crucial, the odd bit of lag can mean the difference between stemming a potentially fatal wound and losing 20 minutes of progress.

DOWN AND OUT

Reaching your corpse lets you retrieve its inventory, but as gaps between campfires grow ever wider, and your ability to create checkpoints gets steadily more challenging, you're forced to go on suicide runs, purely to stock up on supplies to leave at the hub. These survival elements discourage the desire to properly explore, since you haven't really got the time. And the procedural elements that subtly change floor layouts are both too much and not enough: you can't memorise and thus master your domain, but the trek back rarely yields any fresh and exciting discoveries.

During Below's long journey to the light, the survival genre has flourished. Few of its peers can match it for atmosphere, but from crafting to combat to campfire checkpoints, Below feels a little behind the times. ■

CHRIS SCHILLING PC

VERDICT:

Capy's tough love and well-worn survival systems make it harder to appreciate Below's singular look and feel.

7

Tech 275

YOUR GUIDE TO PC GAMING HARDWARE

But can it run Crysis?

Hardware has for now outstripped the software it runs...

Crysis defined a generation of PC hardware, simply because that game was designed to be more or less unplayable at its prettiest settings without hardware first catching up. Which, of course, it did. Pretty much anything can play Crysis these days.

In fact, there's very few games that draw upon all the power of modern hardware. Nvidia's new RTX cards sure are beasts, but there's only a handful of modern titles that have been developed with features like raytraced lighting in mind.

This industry is built on swings and roundabouts, however, so it's only a matter of time until some new game engine comes along that sets us all back on our heels. Until then...

David Hollingworth

Editor

Our Power Award is given to products that are best in class no matter your budget.

Our Smart Buy Award goes to products that balance performance with price tag.

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THE PCPP TESTBENCH

CPU
INTEL I7 7700K
intel.com.au

MOBO
ASUS Z270 ROG CROSSHAIR VI HERO
asus.com.au

RAM
2 X BALLISTIX 8GB DDR4-3200
crucial.com

PSU
CORSAIR 850W PSU
corsair.com

COOLING
H105 CORSAIR COOLER
www.corsair.com.au

Nvidia RTX 2060

Is this the RTX sweet spot?

PC gaming enthusiasts with deep pockets have had access to Nvidia's Turing RTX graphics cards for several months now. They're good cards, though their steep price tags keep them well outside the reach of the majority of PC gamers. Most gamers just aren't interested in dropping $800+ on the (until now) most affordable RTX card — the RTX 2070. Widespread ray tracing adoption will never happen at those prices. The RTX 2060 is now the cheapest RTX series card, though calling a $600+ card cheap is a misnomer for sure.

The RTX 2060 is the successor to the GTX 1060 in name only pretty much. The number of Cuda cores has increased from 1280 to 1920, memory bandwidth increased from 192GB/s to 336GB/s and of course the price has gone up by a hefty amount too. That's before mentioning the RTX features.

It's those RTX ray tracing features that Nvidia has bet the farm on. The die space hogging RT and Tensor cores are at the heart of what Nvidia is trying to achieve with Turing. While the potential is there, we are yet to see it outside of a limited number of demos and titles. Now that we have the hardware, it's time for the developers to start implementing the tech in software. Battlefield V is among the first games and many more are coming that include ray tracing and other features like DLSS. While ray traced lighting effects look gorgeous, is it truly a game changer? Will the Deep Learning focused Tensor cores deliver on their potential? We look forward to seeing whether ray tracing is the real deal or not.

The RTX 2060 uses the TU106 die, the same as the one powering the RTX 2070, though it has some of its cores disabled. It comes with 1920 CUDA cores, 240 Tensor cores and 30 RT cores. This compares with the 2304 CUDA cores, 288 Tensor cores and 36 RT cores of the full TU106 GPU. It comes with 6GB of GDDR6 memory over a 192-bit bus. The TDP of the Founders Edition RTX 2060 is a perfectly reasonable 160W. That's not bad at all for a graphics card with a large 445mm2 die. As was the case with the RTX 2070, the 2060 doesn't support NV-Link, so gaming is limited to a single card only.

"While the forward looking features are very impressive, the jury is still out on whether ray tracing is a game changer or not."

When evaluating the RTX 2060, we can largely repeat what we said when covering the RTX 2070: While the forward looking features are very impressive, the jury is still out on whether ray tracing is a game changer or not. Current game performance is the differentiator that matters most. The price increase over the GTX 1060 places the 2060 against the likes of the well-established RX Vega cards and popular previous generation GTX 1070 and 1070 Ti. If it can beat those cards whilst being cheaper, then we're looking at a winner. Throw in the RTX features as a cherry on top instead of the primary selling point and the RTX 2060 looks like a genuinely compelling buy.

CHRIS SZEWCZYK

Nvidia 2060 Benchmarks

Indictaes Best Result

	Ghost Recon Wildlands (Very High Preset)						Shadow of War (Ultra Preset)			3DMark		Temperatures ©	
	1920x1080		2560x1440		3840x2160		1920x1080	2560x1440	3840x2160	Firestrike	Firestrike Extreme	Idle	Load
	Min	Avg	Min	Avg	Min	Avg	Avg	Avg	Avg				
Nvidia GeForce RTX 2060 Founders Edition	76.69	88.69	56.32	67.45	28.49	38.50	94	66	39	16583	8611	36	71
MSI GeForce RTX 2060 Gaming Z 6G	79.51	93.35	59.94	68.25	30.33	39.43	97	70	40	16956	8722	38	68

CPU: Intel i7-8700K @ 4.8GHz all cores ▪ **Motherboard:** ASRock Z370 Taichi ▪ **RAM:** 2x8GB Crucial Ballistix DDR4-3200 ▪ **Power Supply:** Antec HCP-1200W ▪ **Storage:** 1Tb Samsung 970 EVO M.2 SSD ▪ **Cooling:** Corsair H100i Pro ▪ **Operating system:** Windows 10 Pro 64-bit

GRAPHICS CARD

Nvidia GeForce RTX 2060 Founders Edition

The RTX card the market needs.

PRICE $599
www.nvidia.com.au

Finally we have a somewhat affordable RTX card! RTX generation Founders Edition cards are a big step forward compared to their blower cooler equipped ancestors. The card is surrounded by an aluminium shroud including a solid backplate that looks great, helps with cooling, and adds rigidity to the card.

The RTX 2060 Founders Edition has an excellent array of display outputs, with two DP 1.4 connectors, a single HDMI 2.0b, USB Type-C and a DVI-DL port. The more premium MSI can't match that.

The Founders Edition doesn't have the cooling surface area of the MSI, so it can't match its boost clocks or the essentially silent noise levels. That's to be expected though given its lower spec. The FE isn't noisy though, far from it.

What really matters is not future looking ray tracing support, but how it performs in the here and now. This is where the RTX 2060 impresses. It destroys the GTX 1070 and draws very close to the GTX 1080. This alone makes it a recommendation given its impressive price/performance. Finally Pascal can be considered obsolete, at least in this price range and higher.

The RTX 2060 Founders Edition can't really be considered a GTX 1060 replacement at this price, but that's ok given that it's actually closer to the 1080 in performance. The RTX 2060 is the first RTX series graphics card that we unequivocally recommend. It offers good bang for buck, performs better than previous generation cards at this price point and is relatively future proof.

CHRIS SZEWCZYK PC

VERDICT: **It's not quite mainstream at this price, but the RTX 2060 provides great performance to go with its forward looking features.**

9

GRAPHICS CARD

MSI GeForce RTX 2060 Gaming Z 6G

Faster, cooler, quieter and better looking.

PRICE $679
au.msi.com

MSI's RTX 2060 Gaming Z is the first custom RTX card we've had in our labs, and like MSI's Gaming cards usually are, it's an improvement over the Founders Edition in almost every way.

The MSI Gaming Z is solidly built yet remains quite compact compared to the very large Trio Gaming cards. There's a solid machined backplate and no high end GPU in 2019 would be complete without an attractive dose of RGB lighting. The MSI features three DP 1.4 ports along with a single HDMI 2.0b port though curiously no Type-C port. The card requires just the solitary eight pin power connector. Particularly impressive is the boost clock of the MSI which increases to 1830MHz, a nice bump over the 1680MHz of the Founders Edition card.

MSI's Twin Frozr coolers are highly regarded with a good combination of cooling performance and low noise levels and the 2060 Gaming Z cooler is no exception. The Gaming Z was able to hold boost clocks well above 1900MHz whilst remaining effectively silent.

The 2060 Gaming Z is another highly recommended card from MSI. Its great looks, build quality, and performance that brings it within striking distance of a GTX 1080 whilst maintaining low noise levels makes it an easy recommendation. The price is a good $80 more than a Founders Edition or even a card like MSI's own 2060 Ventus, so whether the premium is justified may even come down to whether you want to show it off in a windowed case.

CHRIS SZEWCZYK PC

VERDICT: **MSI's 2060 Gaming Z is a major improvement over the FE card, but it comes with a decent price premium.**

9

GAMING LAPTOP

Razer Blade Stealth (2019)

The Blade Stealth has a new CPU/GPU combo, but is this enough to make it a proper gaming ultrabook?

PRICE From $2449
www2.razer.com/en-au/

Razer has always offered some of the best looking laptops money can buy, and the 2019 black-anodised aluminium Razer Blade Stealth is no exception. Returning to the 13-inch form factor, we're continually surprised by how small modern ultrabooks can be. Sliding in at a 1.48cm thickness, the new stealth earns its Razer name and the 30.5 x 21cm footprint and 1.28kg weight mean this device is just about as portable as a laptop can be.

Despite being so compact the Blade Stealth manages to maintain a nicely weighted keyboard with a decent travel distance for an ultraportable. This keyboard is skirted by a pair of subtle speaker grills that combine with an additional two undercarriage speakers to create Dolby Atmos three dimensional sound — which isn't bad for personal cinematic playback.

Razer seems to be paring back the number of premium options on this year's Blade Stealth, offering just the one FullHD display option locally and a maximum of 256GB of storage space. You do still have a choice to make: whether you'd prefer the base model with 8GB of RAM, a 256GB SATA 3 SSD and an Intel UHD Graphics 620 GPU for $2449; or if you're willing to pay a few hundred more for 16GB of RAM, a much faster 256GB PCIe M.2 SSD and an Nvidia GeForce MX150 GPU.

Those upgrades are well worth the additional cost in our eyes, not just because the additional RAM is great for work efficiency (you can have way more browser tabs open at once), but also because that GPU isn't too bad. The Nvidia GeForce MX150 is between 40 and 50% less powerful than a GTX 1050 GPU in 3DMark benchmarks, so we're hesitant to call it a fully-fledged gaming GPU. That said it does offer three times the performance of the stock Intel UHD Graphics 620, allowing you to play games like Ghost Recon: Wildlands or Middle Earth: Shadow of War at playable 30fps averages if you drop the quality settings right down or run them in 720p. Less demanding titles like Overwatch, Rocket League, or Fortnite will run really well on this system, so if you only ever game lightly then this is an awesome option.

The Blade Stealth also has an updated Intel Core i7-8556U CPU. This Whisky Lake chip was announced back in August 2018 and while it still uses a 14nm die, it's had a number of considerable optimisations that make it more efficient. It can also boost to a frequency of 4.6GHz for extreme responsiveness in short demanding tasks. This affords the new Razer Blade Stealth a 50% boost in results on demanding CPU tasks like HWBot's 1080p media encoding benchmark from the 2018 Blade Stealth with 16GB of RAM. The performance boost isn't as dramatic in longer and more diverse work tasks, but we still saw a 5-20% uptick in general work benchmarks.

> **Razer seems to be paring back the number of premium options on this year's Blade Stealth.**

The Razer Blade stealth is a considerable upgrade from last year's model in terms of CPU and GPU performance. Unfortunately you will have to live with just 256GB of storage space, but other than this there isn't many ways you can fault the Blade Stealth 2019.

JOEL BURGESS PC

+
- Solid performance boost
- Sleek design

-
- Best used at low graphics settings
- Limited storage

VERDICT: **The idea of a gaming ultrabook may seem far-fetched, but Razer has pulled that off. It's no gaming powerhouse, but it's a fine laptop.**

9

GAMING LAPTOP

Asus Zephyrus S GX531GM

The battle for ultra-thin gaming rages on.

PRICE $3,099
www.asus.com/au

It's time once again to present that most tricky proposition: the gaming ultrabook. Here's an ultra-thin, seriously designed piece of gear that looks as capable of passing itself off in a boring meeting as it is at offering up a slice of gaming gateau. But can you really squeeze everything you need for gaming into a chassis that's less than 15mm thick? Let's find out.

This is actually an updated version of the GX501, with an eighth-gen 2.2GHz Core i7-8750H at its heart, and a 144Hz panel. This panel may lack the G-Sync cleverness of the original model, but as it has a lower-powered GeForce GTX 1060 pumping out the pixels, this is less of an issue, as you'll be hard pushed to hit the frame rates needed to make the most of Nvidia's screen-smoothing tech anyway.

The screen itself is a beautiful slice of what's now possible on laptops, and the fact that it's a 144Hz panel means it's silky smooth in operation. This is an IPS-level screen with vibrant color reproduction and great viewing angles, and the decision to stick to Full HD, as opposed a higher resolution, works in its favor, both for usability in Windows and as far as that GPU is capable of driving.

A key part of the gaming proposition is the Armory Crate software, which lets you change the system profiles. The key idea here is that this enables you to throttle back the performance of the CPU and/or GPU in order to keep noise levels down, or alternatively ignore such niceties and go full bore. Normally, profiles have only a slight impact on performance/noise, but here they make a genuine difference.

For the most part, we're devotees of using the machine in Silent mode, which isn't quite silent, but it is notably quieter than Balanced or the white noise of the Turbo mode. Asus has clearly spent a considerable amount of time honing the cooling here, and the fact that it has squeezed a top-notch CPU and a high-end GPU into such a thin chassis and actually made them usable is impressive. Having said that, don't be fooled into thinking this thing is above the laws of physics—in Turbo mode, it's really freakin' loud.

To give you an indication of the kind of impact this can have, 3DMark produced a score of 10,736 using the Turbo setting, while the same machine managed just 8,097 when running in Silent mode. For our main testing, we left the machine in Balanced mode, which garnered a score of 10,332 in that same 3DMark, which is only slightly off the pace of Turbo setting.

If you're looking to use this as a gaming machine with the latest titles, you're probably going to want to invest in a good pair of noise-canceling headphones.

> **The screen itself is a beautiful slice of what's now possible on laptops**

The build quality is generally excellent, with the CNC-milled chassis and lid producing a relatively heavy but solid-feeling device. The way the bottom drops down to aid airflow as you open the screen is particularly pleasing.

There's another version of this machine available from Amazon with the same name, featuring a GeForce GTX 1070 Max-Q in place of the 1060 here, but costing exactly the same. Obviously, we'd recommend bagging that instead, unless you are, for some reason, averse to buying from Amazon.

ALAN DEXTER PC

+
- Solid design; ultra-thin
- Vibrant screen
- Quiet in Silent mode

–
- Loud in Turbo mode
- GPU lacks real grunt

VERDICT: **It's a bit loud, and has a more powerful bigger brother... but this is still a fine choice for an ultra-thin gaming laptop.**

9

MOTHERBOARD

MSI MEG Z390 Godlike

More glitz than the Vegas Strips.

PRICE $929
www.msi.com

We've spoken a lot about manufacturers turning away from gaming motifs, jazzy lights, and pointy angles in favor of sleeker designs, a more premium feel, and a better quality of product. It's something we've been requesting for ages. You can say that RGB sells; we feel good design sells better.

MSI's MEG Z390 Godlike didn't seem to catch that memo. The layer of over-the-top glam adorning this bulky E-ATX beast was enough to make even our experienced selves take a step back, aghast. From the LED-dotted infinity mirror on the rear I/O cover to the vertically aligned OLED display, showcasing the MSI dragon beating the crap out of some ninjas on startup, to the huge drake motif on the bottom chipset perpetually glowing with rainbow lighting, everything about this screams gauche. There's no subtlety at all. That touch of class we find from the likes of Asus is absent. You could argue, of course, that there's a hole in the market – after all, we don't want every mobo to look like an Asus motherboard – but it's as though MSI saw the latest Formula, and said, "We want that, but x10."

Which leads us to the slight niggle that is performance. Or lack thereof. We get it: Auto-overclocking processors, especially ones as toasty as Intel's Core i7-8700K, isn't a good thing, but it's hard to deny the appeal of that extra performance. Compare this to the Hero, and you lose out by 100 points in Cinebench, nearly 4fps in X264, 10 seconds in Fry Render, and 2ns in memory latency at stock. Power draw is much lower here, with a 26W saving compared to the Hero. It's something.

This is meant to be MSI's best and brightest componentry baked into a fine backbone of a mobo, but we're just not seeing it. Take the power delivery: We're talking twin eight-pin EPS, sitting alongside an 18-phase VRM design (which is actually a 16-phase design in reality). Sounds great on paper, but how does it translate to overclocking? Well, our minimum 5.0GHz stability benchmark test achieved a mundane 1.29V versus the Hero's 1.22, and the maximum overclock we managed was 0.1GHz lower than anything we'd achieved prior. Perhaps it's down to Asus supporting a stronger BIOS than MSI, but there really isn't a lot here to warrant much in the way of compliments.

There must be some positives, surely? Well, connectivity is extensively supported. There are three M.2 slots, with dedicated heatsinks, two internal USB 3.1 headers, two USB 3.0 headers, six SATA 6Gb/s, one U.2 connection port (for the 0.001 percent of the market with a device capable of plugging into it), and two USB 2.0 headers. You also get nine PWM fan headers, one AIO pump header, and a waterflow header. The one saving grace is the fat audio solution.

> **"There's no subtlety at all. That touch of class we find from the likes of Asus is absent."**

Ultimately, MSI's MEG Z390 Godlike mobo tries too hard to be something it's not. The gaming motifs are tired, the LEDs are unnecessary, performance is acceptable at best, and the price is simply absurd. Even the dedicated audio isn't enough to convince us of its value. That's a shame, because MSI could be so much more than it is today – if only the company would take a step back, and try to establish exactly what its market should be.

ZAK STOREY PC

+
- OK performance
- Good audio

–
- Crazy price; under-performer
- Garish design
- Ill-implemented OLED display
- Poor overclocking.

VERDICT: **Every now and then even the best brands seem to make an insane product choice, and this is MSI's shot at the crown.**

6

ADVERTORIAL

Not only is it a powerful router in its own right, but it's a striking piece of design!

Enhance Your Gaming Experience with 802.11AX Wi-Fi and AiMesh

MAKE THE MOST OF YOUR ONLINE EXPERIENCE WITH ASUS!

A good Wi-Fi connection, and the router that enables it, can make or break your performance in an online game. When a wired connection isn't convenient or possible, you'll want to make sure you've got the stability to capture the point in Overwatch, pull off that Battlefield V turnaround, or conquer the kill-leading squad in Apex Legends - no matter who else the Internet is being used for at the time. The fanciest computer in the world won't help you win if your connection is unreliable. Getting the perfect Wi-Fi set-up across your house is essential to living your best life. A good router, and a strong Wi-Fi mesh solution, means never needing to worry about whether anything's downloading before starting up a game, and not needing to hold off while someone else in the house streams 4K content.

The ASUS ROG Rapture GT-AX11000 is the very first tri-band 802.11ax router released by The Republic, and it falls in line with the current highest standards in wireless connectivity. It's designed to let you stream or download huge amounts of data at once by integrating the latest technology into a router that's both simple to set up and extremely powerful. It supports the new 802.11ax standard across three radio bands, each of which can be configured for different devices for a smooth experience across your entire set-up. 802.11ax wireless is designed for high-traffic environments, like airports or malls, catering to a huge number of devices at once – set it up in your home and you'll have a wireless system that can handle anything.

HOW IT WORKS

This is a router designed to minimise network ping, meaning that you'll be set up for multi-tasking traffic without suffering from ping or buffering. It's got better noise tolerance than ever before with a new network packet design that extends guard interval and symbol duration. Even in a low reception environment, the GT-AX11000 performs. This premium router boasts several deluxe features, like a 2.5GbE port, One Touch Game Boost easy router set-up, and ROG Game Center support, allowing you to customise your router's settings for the best gaming experience. It also features VPN Fusion, allowing you to run a VPN and an ordinary Internet connection independently and simultaneously. It's a router that gives you maximum control over your wireless experience.

The GT-AX11000 has outperformed the competition's 4x4 routers it has been tested against, easily surpassing the throughput of the other devices in every 2.4 GHz test. Tested at a 160MHz bandwidth peak, bi-directional peak throughput - upload and download – it can reach an amazing 1298MBps (over 1GBps!) It comes with several features designed with

Asus' GT-AX11000 is one of the most fully-featured routers on the market.

The Asus RT-AX88U is the world's first 802.11ax router to hit the market in 2018.

AiMesh functionality makes for a stronger wi-fi network.

gamers in mind too, like Games Boost, Game Radar, and Open NAT. The wtfast Built-in Game Accelerator and GamesFirst features can lower ping by a third, and as any pro gamer will tell you, every advantage matters. It also supports Aura RGB.

FULL FAT ALTERNATIVES

For casual gamers and enthusiasts, ASUS' RT-AX88U - also known as the world's first 802.11ax router, is another fantastic choice. It's built for multi-device households, and lets you bundle together multiple device's signals and transmit simultaneously with reduced latency. It prioritises game packets, leading to a smoother online experience, and, like the GT-AX11000, features wtfast Built-in Game Accelerator to minimise ping. It also features eight Gigabit LAN ports with link aggregation support, making it perfect for anyone who wants to host a LAN party through one router.

The RT-AC92U, meanwhile, is the world's first router set to offer an AX Mesh solution split between two Tri-Band routers. It comes in a pack of two and is perfect for large or multi-story homes. It offers the most powerful mesh system out there, and again utilises 802.11ax technology to transmit data between the two routers. It can ensure a fast and reliable connection across both levels of your house.

AIMESH HAS YOU COVERED

For many homes, a single router is more than capable of covering every inch of your living space. But if you're in a place with a huge yard, or with concrete walls, or are otherwise experiencing dead zones, you'll want a multi-router solution that gives you as much control as possible over your wireless connection. AiMesh is ASUS' propriety MESH system for connecting multiple routers to form the ultimate Wi-Fi set-up for your home, allowing for centralised control and fast roaming. It's a powerful mesh system that provides coverage that can't be beat.

> With the right Wi-Fi set up, and a powerful ASUS router solution, you can enjoy the best speeds and the lowest pings without interruption.

Simply bring the routers to be paired in range, or connect them to the primary router via Ethernet cable, and click Search from either the router GUI or the ASUS router app to pair. Once paired, you'll have combined multiple ASUS routers into a single Wi-Fi system, extending not only range, but all the advanced network management options, including but not limited to wtfast, Adaptive QoS, AiProtection, and more. AiMesh is flexible and offers the freedom to mix and match as you go, whether that is AX to AC, or ASUS router to ASUS Lyra MESH routers. Once you upgrade, your existing router can serve as another node to extend both the Wi-Fi coverage, as well as offering additional RJ45 Ethernet outlets to your home appliances such as smart TV, consoles, Blu-ray player, you name it.

The AiMesh system is designed to help you move between devices and parts of your house without interruption, for flawless streaming and online play. Unlike other Wi-Fi mesh systems, is supports separate SSIDs for 2.4GHz and 5GHz, allowing you to dedicate high-speed devices to your 5GHz band and, and legacy devices to the 2.4GHz band to maxamise compatibility.

The ASUS ROG Rapture GT-AX11000, RT-AX88U and RT-AC92U two-pack will enhance your gaming experiences with their 802.11AX Wi-Fi, while AiMesh support means every bit of your investment is put to best use. New technologies are going to make the most out of these speeds, too – Samsung's new S10 series of phones are the first on the market to take advantage of the speeds offered by AX Wi-Fi, and more are sure to follow. ASUS' range is the gold standard if you want to experience the best Wi-Fi performance available.

The RT-AC92U may be the range's smaller cousin, but it offers a ful range of gaming features.

SSD

Samsung 970 Evo Plus

Samsung retakes the lead in the great SSD race.

PRICE $769 (2TB), $385 (1TB), $199 (500GB), $139 (250GB)
www.samsung.com/au/

We never expected to see a new NVMe solid-state drive (SSD) from Samsung this soon — especially with the 970 Evo and 970 Pro launching just last April — but here we are looking at the new Samsung 970 Evo Plus. While it might seem like a minor upgrade unworthy of a fully numbered sequel, the Samsung 970 Evo Plus is a worthy successor, with the fastest speeds and some of the lowest prices seen on its NVMe SSD products.

The entire NVMe SSD world is engaged in something of a race to the bottom to offer the cheapest and fastest storage, and it seems Samsung has had to bend to market dynamics. Samsung has brought is prices down across the board compared to the original 970 Evo, which launched in April 2018. Undoubtedly, these new price cuts are a result of WD entering the market with the affordable WD Black SN750.

Although it might seem like the 970 Evo Plus wasn't revolutionary enough to earn the name 980 Evo, it's the first drive from Samsung to introduce its new 96-layer V-NAND.

The 970 Evo Plus is designed to write at 3300MB/s sequential writing speed – far outpacing the 970 Evo, which maxed out at 2,500MB/s, and even the 970 Pro's top 3,300Mb/s – on sequential writes. Sequential writes remain at 3,500MB/s, but this is basically the gold standard among the fastest SSDs on the market. This new 96-layer V-NAND is especially significant as it makes Samsung one of the only companies to speed up its SSDs with new silicon, rather than just updated software. On paper, the 970 Evo Plus exceeds the specs of the WD Black SN750, which runs at up to sequential read and write speeds up to 3,470MB/s and 3,000 MB/s, respectively.

If you were hoping for some competition when it comes to the warranty, unfortunately (or fortunately) WD and Samsung offer the same five years of coverage nearly the identical total terabytes written endurance as seen above. The only difference is the 250GB 970 Evo Plus is rated for 150TBW, whereas the 250GB WD Black SN750 rated for 200TBW.

The Samsung 970 Evo Plus' 96-layer V-NAND isn't just for show, this drive propels past both its predecessor and Samsung's previous star performer, the 970 Pro. It also beats its main rival, the WD Black SN750, in a few areas. Looking at how well the drive performed in both sequential and random data transfer tasks, the 970 Evo Plus comes out on top in every test except our 10GB file transfer.

Considering that the Samsung 970 Evo Plus is meant to be a value-oriented, consumer SSD, we're really pleased by how well it performed.

> **The 970 Evo Plus is designed to write at 3300MB/s sequential writing speed – far outpacing the 970 Evo.**

The only mildly disappointing thing about the drive is that it couldn't maintain its rated 3,300MB/s sequential write speed under load.

As NVMe SSDs just keep getting faster and cheaper, it was time for Samsung to respond in kind – and it has done, with its best drive yet. The Samsung 970 Evo Plus has reclaimed the throne as the best SSD, coming in at reasonable prices and delivering the best overall performance.
KEVIN LEE

+
- 96-layer V-NAND is a success
- The best drive Samsung has produced

–
- Doesn't quite live up to specs

VERDICT: **Under assault from cheaper, faster NVMe solid-state drives, the Samsung 970 Evo Plus proves why it's the king of the SSDs again.**

10

MECHANICAL GAMING KEYBOARD

Thermaltake Level 20 RGB Mechanical Gaming Keyboard

Packed with bells and whistles. Perhaps… too many…

PRICE $199
www.thermaltake.com.au

Thermaltake's Level 20 brand has become somewhat diluted of late. It used to be about over-the-top tech indulgence, as typified by the original, BMW-designed Level 20 case. Following cases have been a little less insane with each new iteration, and you can now pick up budget-level gear that bears the Level 20 moniker. This epically-proportioned new keyboard is, however, truly deserving of the brand.

First up — it is big. Built around an elegantly curved and notched slab of aluminium, the Level 20 RGB takes some getting used to, especially if you're used to using a trim ten-keyless design (which is my standard these days). But it's very comfortable to type on, and its sturdy mass keeps it rigidly locked in place on your desktop, regardless of how many times you slam your mouse into the Level 20 while getting used to its girth.

The main driver behind the Level 20's size is that it is decked out with an almost ridiculous level of RGB lighting. Since it's a frameless design — which we really like, by the way — you can see the RGB-lit keycaps clearly, but there's an RGB strip around the entire edge of the board, as well as a nifty little notch in between the Ctrl and cursor keys, and another very bright lighting strip above this. There are five levels of brightness and a mess of lighting effects, and you can cycle through a range of presets for lighting specific keys for FPS, MOBA, and RTS games. Some of the colour and pattern combinations are downright pretty, but the edge lighting is a little lost – it's hard to notice in any kind of strong lighting as it's inset to the chassis. The only people who'll really see it would by anyone sitting next to you – or you, while sitting a distance away admiring your PC setup.

There's lovely onboard macro recording, which is always handy, and the board we've reviewed features Cherry MX Silver switches, which we've not really spent a lot of time with in the past. The big sell of these switches is — unsurprisingly — that they are fast, and we can concur. The super shallow 1.2mm actuation point really makes this keyboard sing in everything from fast paced FPS games to typing. In fact, the latter is lovely, and the Level 20 isn't too loud, either. With a USB and audio pass-through, media keys, and a wonderfully tactile volume roller, there's not much at all missing.

There really is very little to fault

> **The main driver behind the Level 20's size is that it is decked out with an almost ridiculous level of RGB lighting.**

this keyboard. The lighting might be a somewhat over the top, and with the extra width the edge lighting calls for — and given that it's practically invisible in use — we could easily have done without that feature (and enjoyed the subsequently lower cost). But that's not really what the Level 20 brand is all about. If you want a keyboard that lacks for nothing, look no further (and maybe wear some shades).

DAVID HOLLINGWORTH PC

+
- Very well buit
- Wide range of lighting options
- On the fly macros

–
- So big

VERDICT: **While it may be too large to be new favourite keyboard to use, if you've got the room than Thermaltake's latest will not disappoint.**

9

MOUSE

Corsair Ironclaw RGB

This gaming mouse is a big hand's best friend.

PRICE $85
www.corsair.com

The Ironclaw RGB is targeting serious gamers with some serious specs. It offers a sensitivity range from 100 to 18,000 DPI, and is adjustable in one-step increments. Who needs that high of sensitivity or that granular adjustability? We don't know, but it's not hurting the mouse in any way and the price isn't blown up because of it.

We're fans of the big sweeping arm movements for in-game control, and the Ironclaw RGB's tolerances for accelerations up to 50G and speeds up to 400 inches-per-second (IPS) put it on par with the best mice. We never see it failing to keep up with our movements when swinging around corners or snapping onto targets.

Despite not having physically split mouse buttons, clicking feels surprisingly consistent no matter where your fingers will likely rest. We have no trouble clicking in a quick double tap to hopefully put down an enemy in Insurgency: Sandstorm.

The side buttons rest comfortably out of the way when flicking around, but are easily accessible by rolling our thumb up. They also offer enough resistance that they don't accidentally trigger when picking up the mouse.

The only real issue is the heavy middle mouse button. It takes noticeably more pressure to push down than the left and right click. The same light tap that can actuate the left and right mouse buttons won't do it for the middle mouse button. In a situation where a quick melee attack may be necessary, the heavy middle click can slow things down.

MARK KNAPP PC

VERDICT: **If you can look past the odd design, the Corsair Ironclaw RGB is an affordable, high-performance gaming mouse.**

9

MOUSE

Corsair M65 RGB Elite

Beautiful, fast, and easy on the wallet.

PRICE $85
corsair

While we got sent the white Corsair M65 RGB Elite, you can pick it up in black too, if that's more your aesthetic. And, usually we would go for a black color option, as we don't like how dirty white peripherals can get. At least, that's the way we thought before we got our hands on this mouse.

It's absolutely gorgeous, the white chassis perfectly complements the gray side panels and mouse wheel. And, the way that the RGB shines through the slots in the back of the mouse, creating a lighting pattern beneath it. Seriously, this is some next-level mouse design and it impressive how modern it feels despite largely sticking to the same look as the original M65 RGB, released in September 2014.

No matter how pretty a gaming mouse might be, it doesn't mean much if it can't perform well. And, we're happy to report that the Corsair M65 RGB Elite is an absolute beast of a gaming mouse.

The sensor on the Corsair M65 RGB Elite is rated at 18,000 DPI, and through the iCue software you can adjust it in 1 DPI steps, meaning you can dial in the mouse's sensitivity to a level that's perfect for you. We already mentioned the buttons in the previous segment, but they're incredibly responsive, eliminating any lag between clicks and in-game actions.

We would have liked the ability to make it a bit heavier, but the more lightweight design was easy to get used to. This mouse, with its 18,000 DPI sensor, dedicated sniper button and reliable Omron switches makes it an easy recommendation for any shooter fans out there.

BILL THOMAS PC

VERDICT: **Perfect for shooters and nearly flawless for everything else, the Corsair M65 RGB Elite is one of the best gaming mice out there.**

10

SSD

Western Digital Black SN750 1TB NVMe SSD

WD brings a strong contender.

PRICE $279
www.westerndigital.com

Western Digital's Black series NVMe SSD's have impressed us in the past, though perhaps they lacked that final edge that put them ahead of the likes of the class leading Samsung 970 series. Fast forward to today, and we have the latest iteration of the Western Digital Black, the SN750. It's targeted at gamers and hopefully irons out a couple of the quirks found in earlier generation models. Western Digital is now fully integrated with SanDisk, meaning WD SSDs are now completely designed and built in house. This means WD joins a small club including Samsung who also have this capability. Can WD now go head to head with them?

The WD Black 1TB is a standard form factor M.2 2280 (80mm length) NVMe drive that makes use of a PCIe 3.0 x4 interface. It uses SanDisk BiCS (Bit Cost Scaling) 64-layer 3D TLC NAND flash memory. This is the same NAND found in the preceding WD Black. We might have expected to find cutting edge 96 layer NAND, though perhaps we'll see that in a WD Blue or Green drive at a later date where affordable capacity is needed more than outright performance. WD also plans to offer SN750 series drives with an optional fantastic looking EK designed heatsink.

WD is using its in house designed and built 20-82-007011 controller. It supports common functions such S.M.A.R.T. monitoring but like the previous WD Black, there's no support for disk encryption if that is something that's important for you. The drive comes with a 600 Terabytes Written endurance rating and a five year warranty, matching most of the other drives in this class.

WD offers its Dashboard SSD software package that enables users to update the firmware, see S.M.A.R.T. reports, monitoring and performance statistics. New to this generation is the addition of 'Gaming Mode'. This stops the drive from entering a low-power state, meaning you'll get peak performance at all times. This will increase power consumption a tad, which is something to note for laptop users.

As an evolutionary upgrade, we didn't expect the new SN750 model to blow away the older model, though it does offer improved performance. We're just about at the limits of the PCIe 3.0 x4 interface, so there aren't going to be any leaps in sequential read and write performance until PCIe 4.0 drives hit the market. Sequential reads and writes are very competitive compared to its tough competitor, the Samsung 970 Evo.

It's hard to believe that only eight or nine months ago, the 1TB WD Black was priced at over $600! Now we have an improved version that's less than half the price. 1TB class drives are cheaper than ever, and WD's SN750 offers top shelf performance to match. With a quoted $279 price for the 1TB model, it's simultaneously one of the cheapest and best performing drives on the market. Will the competition be forced to lower prices? WD has hit its stride. With price/performance like this, it's become a very serious player in the SSD market.

"We didn't expect the new SN750 model to blow away the older model, though it does offer improved performance."

CHRIS SZEWCZYK PC

+
- Competitive price
- Solid capacity
- Great performance

-
- Starting to push the limits of the underlying technology

VERDICT: **Samsung has been dominating this space, but WD is making great strides in catching up. If you're on a budget, you won't find much better than this.**

10

Thermaltake's Level 20 RGB Mechanical Gaming Keyboard combines elegant design with gaming performance.

Lift Your Game with the Thermaltake Level 20 RGB Mechanical Gaming Keyboard

A GOOD, VERSATILE, DURABLE KEYBOARD IS ALWAYS A WORTHWHILE INVESTMENT.

It's even more important for gaming, of course – a good keyboard can be the difference between a win or a loss in your favourite MOBA, where quick, accurate keystrokes and effective hotkey programming is important, and being able to switch weapons quickly and move smoothly is essential in an FPS. But an impressive keyboard will also improve just about every other experience you can have with your computer. A good keyboard is one that makes using it satisfying: it feels and sounds good to press the keys, it looks great in front of your monitor, and it lets you customise and make changes based on how you're using it. It should last for a long time, and it should be intuitive and easy to use.

The Thermaltake Level 20 RGB Mechanical Gaming Keyboard offers all that and more. It's a keyboard that mixes the superior aesthetics of RGB design with sturdy switches, strong software support, and a variety of model and colour variations depending on what you're after. It's a sturdy, reliable keyboard, and the perfect addition to any PC set-up.

The keyboard is fitted out with an aluminium faceplate, which is essential for both a sleek, stylish look and its robust durability. This faceplate provides a solid structure, but it also means that you won't need to worry about your keyboard warping over time – it's designed and built to last. It comes in both titanium and black variants, so you can match it with the rest of your set-up, or just go with whichever one is more your style. It even has a gold-plated USB interface – no detail has been overlooked when it comes to build quality.

SWITCH UP

The Level 20 RGB is available with several different switch options, depending on which of Thermaltake's floating keycap designs work best for you. Which switch you'll want will depend a bit on what you want out of your keyboard – the choices available to you cover the different uses and playstyles you might have. The Cherry MX Speed Silver switch is perfect for games that require ultra-fast reactions and key presses. They're designed with an actuation point (the point at which your keystroke is recognised) of just 1.2mm. This allows for a response time up to 40% faster than what you'd get on a standard mechanical keyboard, and when you're playing at the top level every millisecond counts. It's a quieter option, too, if that's what you're after. The Cherry MX Blue, which has an actuation point of 2.2mm,

Even the lighting along the keyboard's side can be programmed.

is for folks who love to hear the click of their keyboard – it's very satisfying to press the keys on.

Regardless of your choice, switches are guaranteed for up to 50 million keystrokes, which is well above the average for a mechanical keyboard. This means that, essentially, you'll never need to worry about your keys wearing out. If you prefer Razer's clackier green keys, they're an option as well – they offer a 1.9mm actuation point and an 80 million click lifespan. All of these keyboards are designed with anti-ghosting capabilities and full-key rollover, meaning that you can type in multiple commands quickly and easily without interruption.

This is a TT RGB Plus model, meaning that you can program it for your custom lighting set-up and sync it with the rest of your parts for a truly magnificent, beautiful display. The Level 20 RBG offers a stunning 16.8 million true colour illumination with 13 different lighting modes. It features RGB around the edges too, with 13 points of illumination on the front and 14 on the side, and it can be programmed for sound control, to indicate system temperature, or in any other way you please.

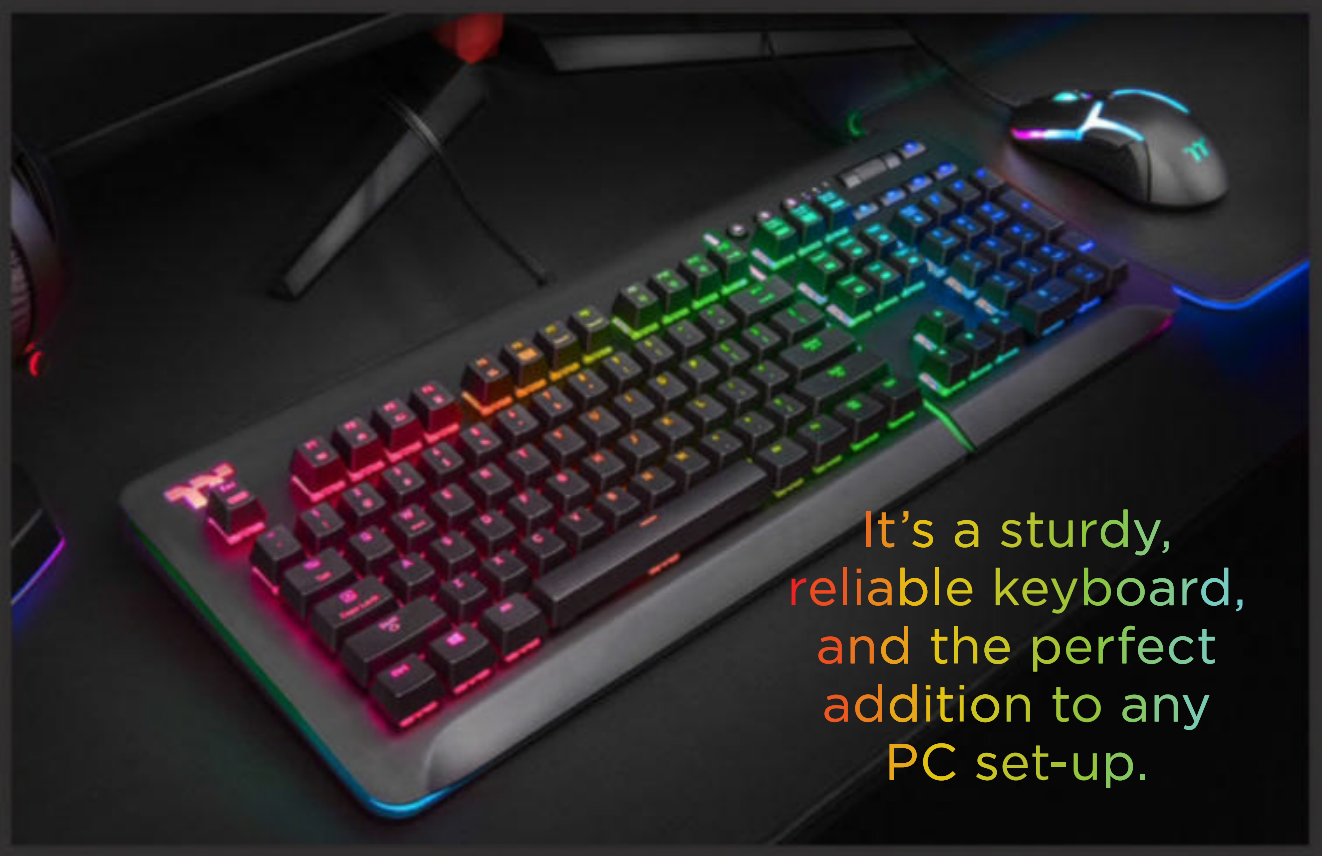
There's an RGB notch right in the centre of the keyboard, too, which is ideal for cable management – your microphone, headset, or webcam cable can be routed right through it. It's also compatible with Thermaltake Power and Liquid Cooling RGB products, making it easy to harmonise your whole set-up's lighting. It'll also soon be compatible with Razer's Chroma RGB lighting solutions, so if you've got an existing set-up you can work it into your lighting system.

There's a range of key types available, including Razer Green switches.

EASY AS QWERTY

The Level 20 RBG Mechanical Gaming Keyboard range is designed to make things as easy as possible for its users. There's full lock functionality available, for instance, in case you want to avoid making unintentional keyboard commands or want to make cleaning your keyboard easier. There's also extensive macro support, so programming multiple keystrokes into just one key is simple and intuitive. This can give you the edge in many games, letting you simplify complicated functions. When you want to relax and enjoy music or watch videos at your computer, you'll find the keyboard's dedicated multimedia keys come in handy. You can change volume, mute, skip, play and pause with quick button presses.

Much of this is possible thanks to Thermaltake's new iTake gaming engine, which is designed to help you get the most out of all your new keyboard's gaming functionality. This is a system for connecting your Thermaltake products to sync colours, customise controls, and set advanced macros. It's easy to use and accessible for any owners of the keyboard. It's fully compatible with Amazon Alexa and allows you to program voice commands, which is very cool when you want to switch your colour scheme on the fly! Aside from this, the powerful onboard memory chipset and processor removes the need for a software switch, allowing the user to control all the keyboard's functions easily.



Regardless of what you're after in a gaming keyboard, Thermaltake's Level 20 RGB Mechanical range has you covered. Whether you're after the ultimate pro-gaming speed switch or want a slightly more tactile click in your presses, both options are available. You can work out ideal custom lighting solutions, the best, most efficient keyboard macros, and even program in voice commands. These keyboards are ideal for both gaming and general use, and they're built to stay strong for a long, long time.

THE REVOLUTION WE TOOK FOR GRANTED: HOW PHYSX CHANGED GAMING

The story of the fate of PhysX is hard to frame. Is it about a plucky little engineering company going up against the might of the big GPU brands, and forcing them to get with the times? Or is it about the all-consuming beast that is NVIDIA, suppressing innovation to maintain its market dominance? The truth, as always, lies somewhere in the middle.

Back in the late 1990s, the first wave of 3D accelerators made proper 3D real-time rendering viable at last. And the Pentiums and Athlons of the time had become powerful enough to handle basic physical effects too, such as some in-game objects falling under gravity or bouncing off walls. It was an age when the idea of a game being "photorealistic" some day, was seriously looking less like science-fiction, and more like an inevitability. Still, it was early days. Very early days.

Quake was the first proper 3D rendered game, and even without a 3D accelerator, it could bounce a grenade off solid surfaces, and have an LPB's rocket exhaust light up the environment as it hurtled toward your face.

But those effects were extremely limited. When you killed a monster, and it collapsed onto the ground, that wasn't the game dynamically calculating how the monster would fall. It was a pre-packaged animation.

In the quest for "better graphics", developers eventually came up with the idea of using procedural animation, generated according to the rules of a physics engine. One of the first games to showcase this... uh, in a certain sense of the word... was Jurassic Park: Trespasser back in 1998. It had so-called ragdoll physics, where enemies were made of a collection of "hard body" objects jointed together. When an enemy was killed, the physics engine would calculate how the poor dino fell into a graceless lump on the ground, rather than just play a pre-animated death sequence.

Sure, Trespasser was kind of terrible as an actual game, but rag-doll physics became THE hot graphics tech for the dawning of a new millennium.

Then, in 2003, Valve announced Half-Life 2 and the Source engine. The E3 demo showed barrels bouncing and floating "realistically", a floppy mattress, and various other examples of really sophisticated procedural animation. The game lived up to the demo, and so the future of gaming set: physics was a thing you had to have if you were making a top-tier 3D title.

From the olden days.

CRY HAVOK

Part of what made the Source Engine possible was Valve's use of a heavily modified version of the Havok physics engine. This was - and still is - one of the most popular SDKs for physics, and the Irish company that created it was snapped up by Intel in 2007, and then by Microsoft in 2015. You've no-doubt seen the Havok logo on more than a few splash screens.

But if there's one thing we can say about game developers, it's that they push hardware to the max. Within a few years, Havok had figured out how to make its engine simulate all kinds of physical effects, especially fine-detail stuff like rippling cloth and realistic smoke.

But procedurally animating a character's cloth shirt in real time in meaningful detail was starting to stress even the most powerful CPUs. It's not like the maths is hard, necessarily, it's just that there's a lot of it going on.

Eventually Havok came up with the idea of writing a new engine that could harness the power of a GPU to do all this calculation with hardware acceleration.

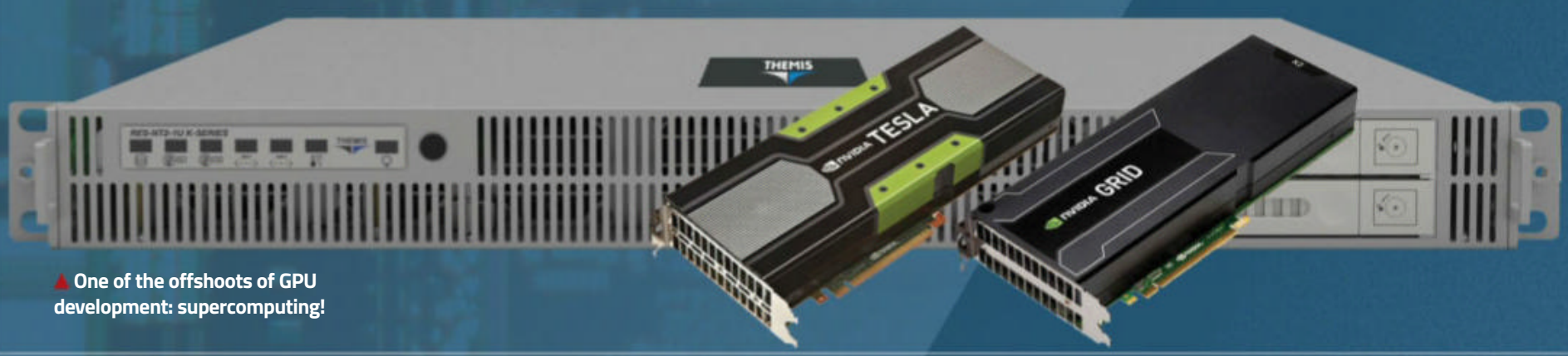
Unfortunately for Havok, their timing was off. The idea was sound: use the GPU to do physics too. But they missed their window. Or perhaps they were focused on maintaining a viable business and didn't want to burn too much cash on R&D.

In any case, there was a new company on the scene, with a new kind of engine, and they were about to change physics simulation so profoundly that barely ten years later we've forgotten all about them. Wait, how does that work?

> "The idea was sound: use the GPU to do physics too. But they missed their window."

LET'S GET PHYSICAL

Physics engines competed for licensing dollars by



One of the offshoots of GPU development: supercomputing!

It was Valve, with Half Life 2's gravity gun, that really showed what a physics engine could do.

Yeah, the game wasn't much, but its physics were groundbreaking.

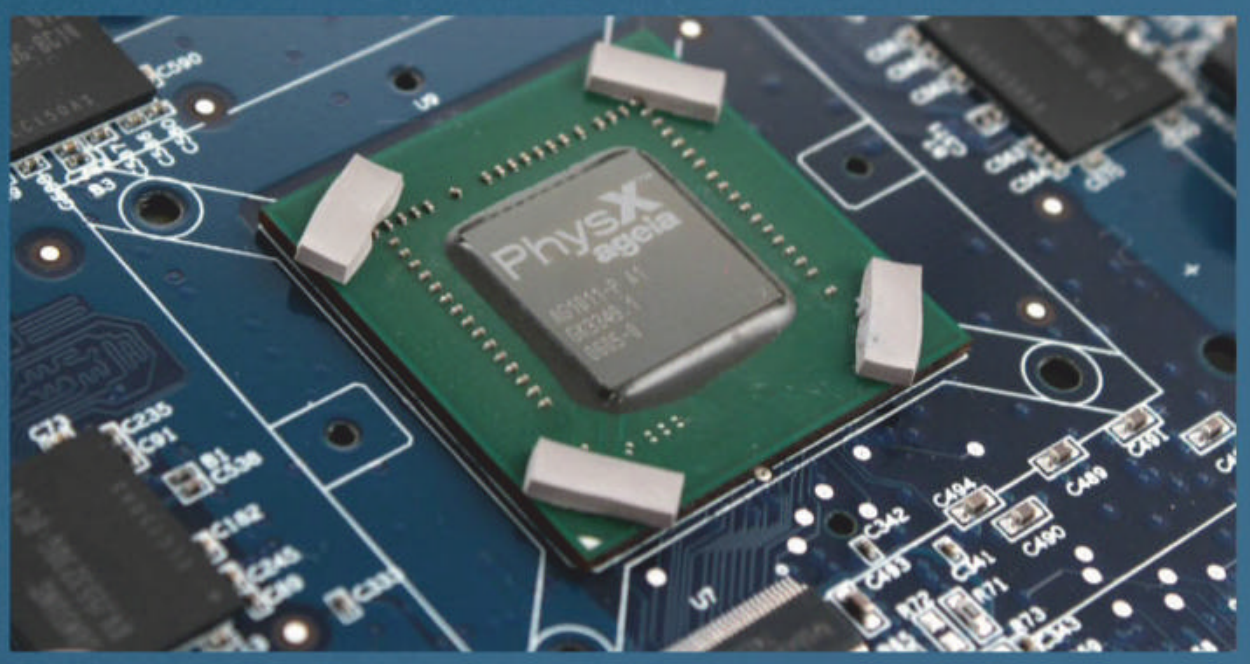
offering more features (collision detection, cloth simulation, etc) combined with more efficient processing.

Around 2004, a Swiss company called NovodeX built an engine that attracted the eye of semiconducter manufacturer Aegia. NovodeX had come up with a way of using a dedicated chip to process physics calculations, and in 2006, Aegia decided the world was ready for a product built around that chip.

They called it a Physics Processing Unit, or PPU, and as the name suggests it would offload the whole of the physics processing from the CPU. It was the first time the idea of doing this in hardware had even been seriously discussed.

Aegia partnered with ASUS, BFG, and ELSA (remember those last two?) to build and distribute PhysX boards. ASUS sent PCPP one for review when they first arrived. We duly plugged it in and the results were... imperceptible?

That's because having a PPU only matters to games that have been developed to take advantage of the relevant physics SDK. Put it this way: NVIDIA has a hard row to plough getting us to buy RTX cards before very many ray-tracing enabled games are even out yet, sure. But at least an RTX 2070 still works as a normal video card!



The physical PhysX card did nothing to actually improve the performance of games that didn't also use the PhysX engine. Worse, because of the way the early version of PhysX was written, it didn't do that much to improve games that did use the engine, either.

PhysX cards sat on shelves, ignored by gamers. It looked like physics acceleration was about to die, almost in the same year it was born, but then Aegia, PhysX, and the future of hardware-accelerated physics was saved by possibly the last people you'd expect - NVIDIA.

CORE ENABLERS

Aegia was confident in its development of the PPU because the two big GPU companies - NVIDIA and ATI at the time - hadn't announced anything about hardware physics support. It was a niche ripe for exploitation. Aegia knew that hardware physics was going to be huge, and they were going to own it. They were half-right.

Because what Aegia presumably didn't know was that both NVIDIA and ATI were deep into the process of creating a whole new kind of thing - the General Purpose GPU.

The GPGPU concept allowed GPUs to do things other than merely sling graphics. Instead of focusing on adding support for certain visual effects, the focus shifted to doing certain kinds of data processing... by treating data as if were graphics.

This shift in thinking is a bit part of what led to a renaissance in supercomputing - and the creation of hugely powerful machines made up of thousands of individual cards that were, essentially, just slightly fancier GPUs.

The GPGPU idea also made it possible to run physics calculations, in hardware, on the video card. So just like that, the entire concept of the PPU was made obsolete. You didn't need one then, and the future of GPGPUs meant you would never need one, because your video card would be able to the PPU's job.

Counter-intuitively, this was a stroke of luck for Aegia. Rather than having to stress about near-zero sales figures and suffer through ignominy of bankruptcy, in 2008 they were instead bought up by NVIDIA.

The PhysX card was axed of course, but the PhysX engine lives on. NVIDIA's GPUs can run all the physics calculations in hardware - indeed, if you're an NVIDIA user today, you've probably seen the PhysX drivers listed when you do your semi-regular system check for dodgy spyware.

Flip ahead to 2019, and hardware physics is just another part of making a game. There are a bunch of different engines and APIs, some of which only do a specific thing (like cloth). The PhysX SDK itself is up to version 4.0 and - in keeping with NVIDIA's general push toward free software running on proprietary hardware - it's open source.

ANTHONY FORDHAM PC

INVENTORY

THE BEST BUILD FOR EVERY BUDGET

CONTROLLERS

Sometimes you gotta go mouse + keyboardless

Xbox One Controller

$69 *microsoft.com/en-au/*

Plug and play meets comfort. Every PC needs a controller and this is the best

Steam Controller

$89.95 *store.steampowered.com*

There's a bit of a learning curve, but it's great for couch gaming

MODEM ROUTERS

For all rational budgets

BUDGET

Synology RT1900RT

$169 *synology.com*

Good performance and delightfully easy to set up and manage

Synology Router RT2600ac

$328 *synology.com*

Perfect for all but the biggest families, has unusually strong transmission strength

PREMIUM

Asus ROG Rapture GT-AC5300 Gaming Router

$695 *asus.com.au*

Super fast and future proof, this is a gaming router that takes no prisoners and offers no compromise.

LAPTOPS

Gaming on the go

BUDGET

Dell G3 15

$1,599 *www.dell.com*

8th-gen CPU and a reasonable GTX 1050 is a bargain basic gamer

PREMIUM

Asus ROG Strix G703 GL

$5,999 *asus.com.au*

The best of everything

MINI

For lounge room gaming and streaming

CPU + COOLING

Intel Core i5 7500 w/ stock cooler

$235

intel.com

MOBO

Asrock Z270M-ITX/AC Motherboard

$185

asrock.com.au

GPU

Asus DUAL-RX480-4G

$338

asus.com.au

MEMORY

16GB DDR4 Corsair Vengeance LPX

$249

corsair.com/en-au

STORAGE

Samsung SSD M.2 2280 NVMe 250G 960 EVO + 2TB HDD (any)

$169 + $50 *samsung.com/au*

CASE

Fractal Design Define S Nano

$115

fractal-design.com

PSU

SilverStone SFX Gold 500W SX500-LG

$110

Silverstone.com

SOUND

Your sound system

What you paid for it

DISPLAY

Your TV

What you paid for it

KEYBOARD

Roccat Sova

$199

www.roccat.org

MOUSE

Roccat Kone EMP

$99

www.roccat.org

TOTAL: **$1,749**

BUDGET

The perfect entry-level gaming PC

CPU + COOLING

AMD Ryzen 5 2600 + Wraith cooler

$235

amd.com

MOBO

Gigabyte B450 Aorus Pro Wifi

$229

gigabyte.com.au

GPU

MSI RX 580 Gaming 8GB

$399

msi.com

MEMORY

G.Skill Ripjaws 4 DDR4 2400MHz 16GB Kit 2x 8GB

$279 *gskill.com*

STORAGE

Sandisk SSD Plus 240GB

$85 *www.sandisk.com.au*

CASE

Corsair Carbide SPEC-02 Mid Tower Gaming Case

$80 *corsair.com/en-au*

PSU

SilverStone Strider Essential 500W ST50F-ESB **$55**

silverstone.com

SOUND

Cougar Phontum

$69

cougargaming.com

DISPLAY

AOC Q3279VWFD8 75Hz Freesync 32in IPS

$299

au.aoc.com

KEYBOARD

Tesoro Tizona G2N

$49

tesorotec.com

MOUSE

Cooler Master MM530

$59

coolermaster.com

TOTAL: **$1,829**

A couple of additions this month - and they both actually DROP the price of their builds. Our performance PC gets a new SSD in the shape of Samsung's new 970 EVO Plus. It's not only a fantastic drive, but also $120 cheaper. Bonus! The addition to THE BEAST, however, drops its price by only $10, but it now includes our new favourite mouse, Corsair's latest M65 model.

PERFORMANCE

Most bells and whistles, without breaking the bank

CPU + COOLING
Intel Core i7 8700K with Noctua NH-D15 CPU Cooler
$529 + $115 *intel.com*

MOBO
Asrock Z370 Taichi
$284
asrock.com.au

GPU
MSI GeForce RTX 2070 Gaming Z 8G
$1069
au.msi.com

MEMORY
G.Skill RIPJAWS 4 32GB KIT 4X8GB
$599
gskill.com

STORAGE
2TB HDD (any) + SAMSUNG 500GB M.2 NVMe SSD 970 EVO PLUS
$199 + $50
samsung.com/au

NEW!

CASE
Fractal Define R6
$209
fractal-design.com

PSU
Be Quiet! Dark Power Pro 11 850W Power Supply
$279
bequiet.com

SOUND
Sennheiser PC 373D
$329
en-au.sennheiser.com

DISPLAY
Asus ROG Strix XG32VQ
$859
www.asus.com/au

KEYBOARD
Cooler Master MK750
$189
www.coolermaster.com

MOUSE
Roccat Kone Aimo
$99
www.roccat.org

TOTAL: **$4,809**

THE BEAST

When overkill is barely enough...

CPU + COOLING
AMD Threadripper 2 2990WX + Corsair H105
$2,699 + $145
amd.com

MOBO
Asus ROG Zenith Extreme
$559
asus.com.au

VIDEO
Nvidia GeForce RTX 2080 Ti
$1,899
nvidia.com/en-au

MEMORY
4x8GB G.Skill Trident Z RGB quad-channel 3466MHz DDR4
$745
gskill.com

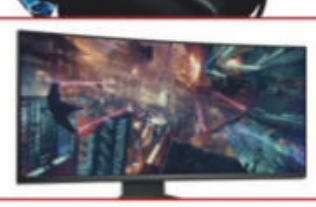
STORAGE
Samsung 960 Pro 2TB + Seagate Barracuda Pro 10TB
$1,589 + $599
samsung.com/au

CASE
Thermaltake Level 20 GT
$369
thermaltake.com.au

PSU
Corsair RM1000i Special Edition
$279
corsair.com/en-au

SOUND
Astro A50
$399
www.astrogaming.com

DISPLAY
Alienware AW3418DW
$2,099
alienware.com



KEYBOARD
Corsair K95 Platinum RGB
$249
corsair.com/en-au/

MOUSE
Corsair M65 RGB Elite
$85
rcorsair.com/en-au/

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Overwatch Lego
$19.99+ ▪ Lego
shop.lego.com/en-AU/
From a measly $20 right up to $140 you can own one of six Overwatch Lego sets, which range from a single character (Bastion) through to set pieces with minifigs for something like Watchpoint Gibraltar with Mercy and Winston.
POWERED UP: It's Overwatch. It's Lego. What's not to love?
PLAYED OUT: The sets with the minifigs aren't as cool as the bigger builds like Bastion, Reinhardt, and D.Va. There also isn't a full set of heroes (yet) so if you're a weirdo who hates all the current options, you'll have to wait. Or maybe make your own!

Samsung Galaxy Fold
~$3000 ▪ Samsung
www.samsung.com/au/
Bendable displays are something phone manufacturers have been talking about as a concept for a while, and it looks like the tech is about to go mainstream with Samsung announcing the Galaxy Fold.
POWERED UP: 7.3in QXGA+ AMOLED with the cover display at 4.6in HD+ AMOLED. It has more cameras than we even know what to do with – two for selfies, three on the rear to get ultra-clear brunch photos. Octa-core processor, 12GB RAM, and 512GB storage, with room for another 512GB on MicroSD.
PLAYED OUT: That price sure is something else. Wow.

Miu
$800 ▪ Miu
miu.jp/#en
Calm Design is the motto to which Miu adheres, and it doesn't get much calmer than a chunk of murdered tree stuffed with electronics and then hung on your wall for your entertainment. And entertain it can.
POWERED UP: Wifi and Bluetooth connectivity allow this minimalist piece of tech to show temperature, weather, time, display messages, control lighting, heating... just about anything you'd want a smart device to do. The standout is the actual display, which is invisible until the device is touched.
PLAYED OUT: No voice command ability yet, which is a real shame.

Opkix One
$450+ ▪ Opkix
www.opkix.com
If you've ever wanted people to shy away from you in horror, attaching a small camera to your glasses is a good way to get it to happen, and the Opkix one is small and light enough to do just that.
POWERED UP: 1080x1080 30FP recording, IP-67 dust and water resistant, up to 70 mins of capture time. It's "egg" case has some smarts too, and will transfer your videos to your phone while charging the camera at the same time.
PLAYED OUT: Opkix claims this is "social video", but we're not able to envisage the social situation in which a camera like this is welcome.

Roboshark
$TBA ▪ Robosea
www.robosea.org
Take your sea/swimming pool prank game to the next level with this (nearly) two metre long robot shark.
Hilarity ensues.
POWERED UP: With the ability to swim (like a shark) at up to 10 knots, down to 300m, and able to be kitted out with an assortment of sensors and cameras, the Roboshark is a neat underwater research tool. Theoretically its shape and natural movement should allow it to observe the environment in ways other equipment couldn't, assuming all the ocean life isn't scared off because it's shaped like a deadly predator.
PLAYED OUT: Roboshark doo doo doo doo doo doo. PC

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JAGGED ALLIANCE

A beloved 1990s franchise being snapped up by a big publisher and handed over to a new studio for a remake is hardly unique. But when an IP goes through half a dozen developers and publishers on three continents, gets cancelled, reborn, reimagined, crowdsourced twice, and still seem to be alive after 24 long, hard years... it must be something special.

JAGGED ALLIANCE (SERIES)

DEVELOPERS MAD LABS, SIR-TECH, I-DEAL, CLIFFHANGER, COREPLAY, BIGMOON, MIST LAND SOUTH, AKELLA, F3GAMES, FULL CONTROL, AND THEN CLIFFHANGER AGAIN.
PERSONALITIES IAN CURRIE, LINDA CURRIE, SHAUN LYNG, AND A LONG LIST OF BANKRUPTS WHO THOUGHT THEY COULD MAKE SOME MONEY OUT OF THIS IP SOMEHOW.
RELEASED 1995-2018
NUTSHELL UNIQUE MIX OF 4X, RPG AND TACTICAL TURN-BASED MERCENARY COMBAT, WITH REAL GUNS AND ALWAYS A RIDICULOUS STORYLINE. FOR INSTANCE, IN THE ORIGINAL GAME YOU'RE KILLING PEOPLE OVER CONTROL OF MUTATED TREES THAT PRODUCE A MIRACLE SAP. BUT IT DOESN'T MATTER BECAUSE THE GAMEPLAY IS TRANSCENDENTAL.

As a PC gamer, you understand why the question "how many games are in the Jagged Alliance series" doesn't have a simple answer. IPs flip back and forth between publishers all the time, because PC gaming is an industry that's 1% megahit, 99% living on the razor's edge of insolvency. Any franchise that looks like it has even the tiniest bit of legacy with gamers gets bought up and flogged, even if the actual game has nothing to do with the original. See also: Prey.

Jagged Alliance though is something unique. While it wasn't the only turn-based tactical squad game of the mid-to-late 1990s, it had a free-flowing strategic layer unlike anything else, and incredible depth.

By the time the original developers were ready to let their baby grow wings and fly away, JA had a core fanbase and the respect of critics, publishers, and gamers alike. It was almost ideally set up to spawn a franchise at least as big as X-Com.

But it didn't. Instead, Jagged Alliance became almost a sort of poison chalice, but one that publishers kept drinking from because it had to be profitable somehow, come on you guys, it's Jagged Alliance!

Here's what actually happened.

OPENING SHOTS

PC gaming in 1995 was all about definitive adventure games (Full Throttle), deep-geek turn-based strategy (Mechwarrior 2) and pushing the limits of 3D (Descent). Then into the middle of all this dropped Jagged Alliance - a turn-based tactical game from Canadian developer Sir-Tech, with a structure that wasn't quite like anything else. Okay, the turn-based combat was familiar enough, with action points and so forth. But the strategic layer - which allowed the player to secure the island nation of Metavira sector-by-sector - meant there were no missions, as such. NPCs would pop up and offer objectives, but the player was free to ignore them.

More importantly, there was a massive roster of mercenary soldiers to choose from, each with unique stats and "funny" personalities. The player also had to manage a population of guards - to keep conquered sectors from falling into enemy hands - and tappers. Tappers were workers who... uh... harvested medically magical sap from trees that had been mutated by US nuclear testing.

In any case, JA sold well for its time, at least enough to give Sir-Tech the confidence to develop a sequel in 1999. Jagged Alliance 2 was one of those rare things - a game that was true to the original but just gave the player more.

Now using the increasingly popular isometric perspective, JA2 added NPC dialogue trees, interactions between mercenaries and morale, a semi-destructible environment, and a slightly less ridiculous backstory involving a democratically-elected King.

All pretty straightforward so far. So how did JA go from this 90s innovation success story to a confusing mess? Ah well that's its secret - by the time JA2 came out, it was already a confusing mess.

YOU MADE THIS? WE MADE THIS!

What's confusing about Jagged Alliance 2 is that it wasn't the second game in the series, it was the third.

Sir-Tech had developed Jagged Alliance: Deadly Games in 1996, which was a mission-based, more-than-an-expansion-pack-less-than-a-true-sequel to Jagged Alliance. It was the first Jagged Alliance game that Sir-Tech developed.

Wait, didn't I say Sir-Tech had developed the original? Well, technically yes. Certainly, the core creative team of Ian Currie, Linda Currie, and Shaun Lyng were responsible for JA, JA:DG, and JA2. But they did most of their work on the original game as Mad Labs Software, which was brought into Sir-Tech before the game was released.

Exactly who published Jagged Alliance 2 is surprisingly difficult to figure out. It seems

Sir-Tech (the US publisher) had gone bust even before JA2 was released but had transferred the game rights to Sir-Tech Canada, which was apparently a development studio. Got that? They organised to get JA2 published by TalonSoft, but the expansion, Unfinished Business, was published by Interplay, because TalonSoft had already gone bust. Or maybe it went bust later.

At or about this point, in the early 2000s, Montreal publisher Strategy First Inc took on the Jagged Alliance IP. The circumstances are unclear but the result is plain: SFI would spend the next decade trying to work out a way of replicating the critical and (modest) commercial success of Jagged Alliance 2.

Spoilers: they didn't.

ENTER THE RUSSIANS

One way to reboot a franchise just three years after its last successful game is to hire some or all of the original creative team and hope they can take it to the next level. Another way is to flail around the globe looking for someone to make you something you can call Jagged Alliance. SFI went for the latter. Big time.

First they did a weird deal with a modder named Serge "WildFire" Popoff and i-Deal games to produce a tweaked-up rerelease of JA2 called, naturally, Jagged Alliance 2: Wildfire. This came out in 2004 but then i-Deal games accused SFI of not paying them.

Rather than pay i-Deal and keep going, SFI instead engaged Cypriot publisher Game Factory Interactive, who in turn contracted with Russian developer MiST Land South to make Jagged Alliance 3D (which would be Jagged Alliance 2, but in 3D) and Jagged Alliance 3.

Unfortunately, GFI then went somewhat off-commission, and tried to get SFI to accept a game with no strategic layer and a mission-based story. SFI might have been convinced, but then GFI said the game would have real-time combat instead of turn-based, and Strategy First vetoed this decision and things got a bit nasty and the end result was an end to the relationship and no JA3D. SFT moved on, and that was that for GFI until 2008, when they put out a game called Hired Guns: the Jagged Edge. Subtle.

Before that though, back in 2006, Strategy First had decided to try outsourcing the game again, and naturally chose a Russian mob called Akella, because of the good experience working with Russians the first time.

Jagged Alliance 3 stayed with Akella until 2010, when SFI presumably said to hell with it, and boxed up the IP and sold it to a German outfit called bitComposer.

LOSS OF SIGNAL

So Jagged Alliance entered its second decade as a mess of failed remakes, leaving a trail of angry Russians behind it. And there was no way bitComposer was going to betray a legacy like that. So they published another mediocre remake of JA2 called Jagged Alliance: Back in Action, flailed around with some expansion packs, and then went bankrupt in 2015 and sold the IP to THQ Nordic who, despite all evidence to the contrary, called the purchase a "no brainer".

I can't really figure how, in 2013 while bitComposer was sinking but before THQ Nordic bought the IP, Danish developer Full Control was able to crowdsource Jagged Alliance: Flashback. But it did. They stripped even more gameplay and mechanics from JA2, the fans hated the game, and so, logically, THQ Nordic waited five years and released Jagged Alliance: Rage - which (ignoring JA Classics, the Nintendo DS version, and how i-Deal games somehow released an updated version of JA: Wildfire by itself) brings us up to date on the state of the IP that just won't die.

Developed by Cliffhanger (who had done Jagged Alliance: Online back in 2012, wait did I mention that one? Whoops), JA: Rage has finally done justice to the series and all the fans love it to bits.

Nah just kidding, they hate it too.

So in the 24 years since JA2 created a new kind of tactical turn-based PC game, nobody has done anything to justify the franchise's survival. Yet live on it does, because even after all this time, everyone still agrees that Jagged Alliance 3 is going to be awesome.

ANTHONY FORDHAM PC

Next Issue

ISSUE 276 ON SALE

MAY 2019

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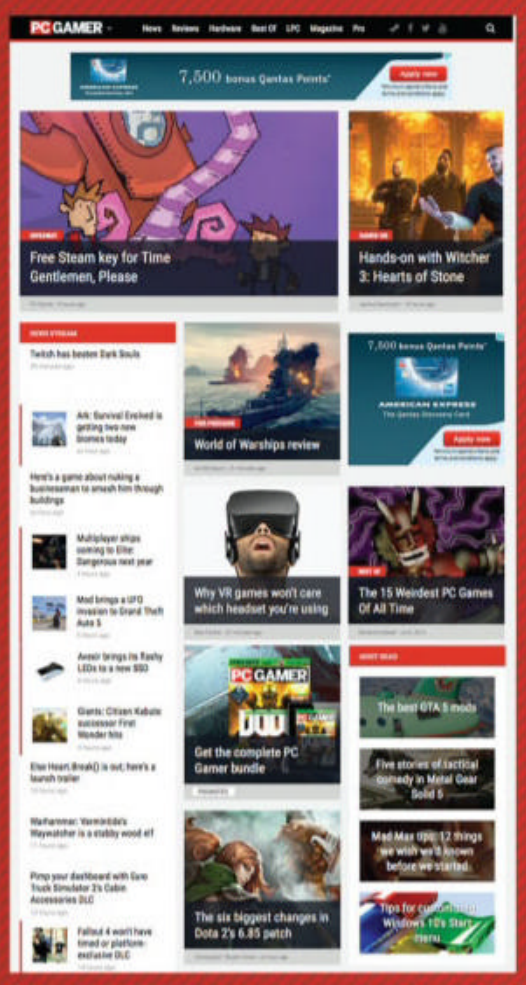
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